THE NEED TO DEVELOP EDUCATION AND TRAINING PROGRAMS ON THE MEDICAL RESPONSES TO THE CONSEQUENCES OF TERRORIST ACTIVITIES

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BEFORE THE

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OF THE

COMMITTEE ON VETERANS' AFFAIRS

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November 14, 2001

THE NEED TO DEVELOP EDUCATION AND TRAINING PROGRAMS ON THE MEDICAL RESPONSES TO THE CONSEQUENCES OF TERRORIST ACTIVITIES

WEDNESDAY, NOVEMBER 14, 2001

U.S. HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS,
COMMITTEE ON VETERANS' AFFAIRS,
Washington, DC

The subcommittee met, pursuant to notice, at 10 a.m., in room 334, Cannon House Office Building, Hon. Stephen E. Buyer (chairman of the subcommittee) presiding.

Present: Representatives Buyer, Carson, and Hill.

Also present: Represenatatives Smith, Evans, Snyder, and Shaw.

OPENING STATEMENT OF CHAIRMAN BUYER

Mr. BUYER. This hearing will come to order.

This is the Subcommittee on Oversight and Investigations of the Committee on Veterans' Affairs.

Good morning.

Today's hearing will examine a very important question which affects not only those of us in this room, but all Americans.

We must answer the fundamental question: Is the U.S. medical community prepared for biological, chemical, and radiological acts of terrorism?

Since September 11th, our country has been in a constant state of fear and anxiety of not only flying the so-called friendly skies, but also opening our mail.

We are fighting a two-front war, not only here in America, but also abroad. It is clear our health care providers are not resourced or trained with the proper tools to detect, diagnose, and treat casualties in the face of biological, chemical, and radiological weapons.

The purpose of this hearing is to review the critical roles that the VA and DOD should play in providing our Nation's medical students and the current health care professionals with the education and training programs necessary to respond to terrorist activities.

Before I continue with my statement, I would like to extend a warm welcome to our distinguished panelists.

I know Adm. Eisold is presently here, and we are waiting on two members, Dave Weldon of Florida and John Cooksey of Louisiana.

I would like to extend a special welcome to Adm. Eisold, who is our Attending Physician to Congress.

Since the Office of the Attending Physician was established in 1928, this will be the first time someone in your position, Adm. Eisold, will testify before a House committee or a Senate committee.

However, given the importance of the subject matter of this hearing, and your personal and professional interests over these last weeks, I know it is critically important and the perspective that you have to share with us on this critical subject will be substantive.

I also would like to recognize two physicians who are on the front lines in this medical war on terrorism.

First is Dr. Susan Matcha, who diagnosed and treated two employees at a Washington, DC area Postal facility who contracted the anthrax virus.

Second is Dr. Carlos Omenaca, who diagnosed and successfully treated one of the first victims of inhalation anthrax in the Miami, FL area.

A welcome should also be extended to the VA Deputy Under Secretary for Health, Dr. Fran Murphy, and her staff.

Dr. Val Hemming, the Dean of F. Edward Hébert School of Medicine at the Uniformed Services University of the Health Sciences (USUHS).

Dr. Edward Hill of the American Medical Association.

Dr. Jordan Cohen of the American Association of Medical Colleges.

Dr. Martin Blaser of New York University.

They are all here today because this hearing will provide us, as well as the American public, with information crucial to the new war on terrorism.

Your testimony will help the subcommittee better understand the alleged shortcomings of the medical community's educational institutions and how the VA and DOD can assist and coordinate expertise to help a new generation of doctors detect, diagnose, and treat these new threats to public health.

Experts have been warning us for years that our health care system is not prepared for a chemical, biological, and radiological event that terrorists or otherwise.

I would like to share with you a foretelling statement made by Dr. Tara O'Toole in 1999. Dr. O'Toole, a senior fellow at the Center for Biodefense Studies at Johns Hopkins University, said, I quote, "Media coverage of modern epidemics will have a profound influence on the outcome of response efforts should a biological attack occur. The number of people who were ill and in need of hospital care would likely be exceeded by the individuals seeking care, because they were fearful of being sick."

And I believe that this was the public response to the recent anthrax attacks. I firmly believe that physicians and the entire health care community must be educated about the potentially devastating consequences of terrorism and the critical role that health care providers must play in addressing such attacks.

It is essential that health care providers can recognize the basic clinical manifestations and treatment of diseases caused by these weapons of mass destruction.

Our civilian health care system must develop effective and practical responses to these deadly weapons. They must do this through planning, training, and preparation for further terrorist attacks.

This is why I introduced H.R. 3254, the Medical Education for National Defense in the 21st Century.

I would like to thank the Chairman of our Full Committee, Chris Smith, and Lane Evans, Ranking Democratic Member, Michael Bilirakis, the Committee's Vice Chairman, Cliff Stearns, Vice Chairman of the Health Subcommittee and John McHugh, the Chairman of the Subcommittee on Military Personnel, and this subcommittee's ranking member, Vic Snyder.

This legislation proposes to create a partnership between the VA and DOD and tasks these two agencies to develop and disseminate a program to both our current medical professionals and current medical students in the Nation's medical schools.

We already have a nexus in place between the medical universities, where there is a VA hospital in close proximity, and this is what we plan to tap into.

The combination of the DOD's expertise in the field of treating casualties resulting from unconventional attack and the VA's infrastructure of 171 medical centers, 800 clinics, satellite broadcasting capabilities, and a preexisting affiliation with 80 medical schools, will enable the current and future medical professionals in this entire country to become knowledgeable and medically competent in the treatment of casualties of weapons of mass destruction.

We cannot afford to assume that our country will never have to experience a massive biological, chemical, or radiological attack.

We must act to ensure that if the worst of our fears are realized, our medical professionals will be ready and able to effectively respond to such fallout.

An American Association of American Colleges Reporter article in December 1998 quotes an issue of military medicine that says "Even military physicians, who should be more prepared than civilian doctors, aren't sure about their capability of handling such a situation."

The June 1998 issue of Military Medicine reported that only 19 percent of military physicians were confident about providing care in a "NBC" situation.

The majority of those confident few, or 53 percent, were USUHS graduates.

And, Dean, if you have any comments on that article, I would appreciate that.

It is not the intent of this legislation to create a new community standard of practice. We must recognize that diseases, such as smallpox, botulism, and the plague are not normally seen or treated by clinicians around the country.

I noticed this morning in the press that one of the families, a postal worker, has already obtained a lawyer and filed suit over that death.

The physicians all across the country, family physicians, aren't looking for anthrax, they are not looking for botulism, smallpox, and that type of thing.

So I just want to make sure that, and be on the record as far as legislative intent, I am not interested in setting new community

standards here with regard to health care, nor am I trying to lay a groundwork for trial lawyers out there.

I think it is extremely important that we disseminate the expertise that we have so that the doctors, in their diagnostic analysis, begin to think about other things than what they normally consider in their family practices.

At this time, I will turn to Ms. Carson, the ranking member, for any comments that she may have.

OPENING STATEMENT OF HON. JULIA CARSON

Ms. CARSON. Thank you very much, Mr. Chairman. Welcome to our distinguished guests and witnesses.

The stated purpose of this hearing is to address the need to educate this Nation's medical students and current health professionals to diagnose and treat casualties when weapons of mass destruction have been used.

There may be a missing element hidden somewhere in that approach, because grasping the scope of this particular problem is an untidy task.

A weapon of mass destruction can take many forms. The aircraft that struck the World Trade Center Towers and the Pentagon were weapons of mass destruction in every sense.

Yet, they were not nuclear, radiological, biological, or chemical, in the sense that I think we want to capture at this hearing.

If we are concerned about NBC agents, nuclear, biological, and chemical agents, one would hope to find that the DOD, in its preparation of medical personnel for conflict in dirty environments, is ready to recognize and treat the effects of NBC warfare.

Of course, the employment of NBC agents may not be a terrorist act in armed conflict. It may be part of the conflict.

Hearing testimony limiting the debate to only medical emergencies that spring from terrorist attacks may be unnecessarily restrictive.

Blistering of the skin, for example, can occur from contact with harsh chemicals. That may be the result of accident or terrorist.

Similarly, contact with some harmful biological substances can spring from nature, accident, warfare, or terrorism.

The treatment, when the numbers of casualties are low, would be essentially the same for all.

But I agree that the first step is recognition and diagnosis.

For this reason, Mr. Chairman, I like your recently introduced bill, H.R. 3254. Clearly, your heart is in the right place with this piece of legislation.

However, I would broaden the scope of the training in some regards and not restrict it to events caused by terrorism.

I would think it important to be open in that regard. If, for instance, salmonella is a natural agent, for example, it needs to be recognized, reported and treated. Patterns need to be determined.

In this way, you can determine if the outbreak of the disease is from a truckload of unwashed vegetables, a tainted container of salad dressing, or a covert terrorism attack, as occurred a few years ago in Oregon.

We wholeheartedly agree on the need to sharpen diagnostic skills to recognize and treat not only the old scourges, but emerging scourges, as well.

Our subcommittee's jurisdiction in this regard is married to the VA and those Executive Branch agencies impacted by the VA's so-called fourth mission.

The most direct interface in this regard, because of Public Law 97–174, is the DOD. I think it is shortsighted to limit any accelerated cooperative training program to only the VA and the DOD.

I would speculate that the DOD is currently better prepared at the present for the full spectrum of NBC problems than are their non-DOD counterparts.

Medical personnel nationwide in both public health and in the private sector must also hone those NBC diagnostic skills. This includes the VA.

Mr. Chairman, if it is your position that the DOD could be an excellent mentor, having already established medical training curricula in this area, I would tend to agree.

Mr. Chairman, I am concerned whenever any single agency or pair of agencies attempt to react to a problem of national impact and national importance alone when there could be a greater collective pool of information.

The wider you cast your net of trained observers, the more data points you are likely to collect. It would be more likely that the VA and DOD together could recognize patterns and disease outbreaks than could the VA alone.

Similarly, enhancing the scope of data collectors and reporting physicians to the private sector would enhance the ability of epidemiologists to spot patterns.

And to use my previous example, once the cases of salmonella begin cropping up at different locations, someone has to recognize that those patterns are arising.

Mr. Chairman, in closing, let me expand our nets not only to enhance the coordination between the DOD and the VA, but also encourage the DOD and the VA to coordinate and cooperate with other agencies in all levels of government to assure that we are collecting and reporting useful information.

Too often, we try to manage one agency and fix a broad scale problem. We need to coordinate to speak and plan across the full spectrum.

Terrorism speaks to a public at risk. By enhancing coordination, we reduce those risks. If someone had told the postal equipment repair people in Indianapolis that they would soon receive postal equipment from the east that had been contaminated by anthrax, there would have been far less disruption in my district.

Coordinate, cooperate, and think.

Mr. BUYER. Thank you for your constructive comments.

Before I yield to other members for comments, I will put this in perspective for everyone.

The legislation that I introduced and the purpose of this hearing is a piece of a larger picture. Kennedy-Frist introduced a bill on the Senate side with regard to bioterrorism.

The Commerce Committee, which I also sit on, and the Health Subcommittee, we are putting together a legislative package that

will address not only bioterrorism, but, also, chemical and radiological agents.

It is a comprehensive bill and what we are discussing here today is a piece of that legislation.

So this is not just isolated.

The chairman of the full committee, Mr. Smith.

OPENING STATEMENT OF HON. CHRISTOPHER H. SMITH, CHAIRMAN, FULL COMMITTEE ON VETERANS' AFFAIRS

Mr. SMITH. Thank you very much, Mr. Chairman. I want to thank you for convening this very important hearing and I want to commend you for your leadership not only on this panel, but on national security matters, as well, throughout the entirety of your career, and we thank you for that.

It is now just about 2 months since the September 11 attacks that have forever changed the world that we live in.

The pain and the suffering and the individual and collective grief of that horrific day was still tender when we were attacked once again, this time through our postal system by way of anthrax.

My congressional district includes the city of Trenton and Hamilton Township, New Jersey, where the three known anthrax letters originated.

So I am especially interested in hearing from today's witnesses what their recommendations in shaping national policy are to more quickly and effectively detect and, if necessary, respond to any future attacks.

This was the first time our Nation has ever experienced bioterrorism, but I fear it will not be the last. It is a matter of when and not if, because there are so many cruel people out there who are willing to use these despicable means to kill.

That is why I want to especially, again, commend Chairman Buyer for holding today's hearing and for introducing H.R. 3254, the Medical Education for National Defense in the 21st Century Act.

This legislation, which I am proud to co-sponsor, establishes a joint VA-DOD program for educating our Nation's health care professionals to detect, diagnose, and treat victims of biological, chemical, and radiological terrorism.

As Chairman Buyer pointed out, and I can attest from my direct experience relating to those attacks in New Jersey, there is a dangerous and enormous gap in our medical knowledge that has to be filled.

We need to maximize the national resources that already exist, such as the Department of Defense's Uniformed Services University of the Health Sciences, and the VA's extensive health care infrastructure.

As many of you already know, the VA has already been tasked with the job of training public and private medical center personnel in responding to biological, chemical, or radiological events under the National Medical Disaster System.

H.R. 3254 is another logical step in that direction.

Let me also point out that I have introduced legislation, H.R. 3253, the National Medical Emergency Preparedness Act of 2000, which addresses another important aspect of this problem, that of

increasing the knowledge base of biological, chemical, and radiological hazards.

I was amazed, when we were hit with this terrible anthrax, that there was no real clear protocol, there was no predictability as to how this had to be answered.

When do you close a building? What kind of testing do you do? Who is in charge?

We had our head of the health department, working with CDC and others, and it was not clear who actually was the quarterback, if you will.

Those kinds of protocols need to be established and form a base, not a ceiling. Obviously, they could be added to, but to form a base, so that we know with some predictability and with some uniformity what happens if smallpox or some other terrible hazard is unleashed.

H.R. 3253 will create four new medical preparedness centers to research and develop methods of detection, diagnosis, vaccination, protection, and treatment for these threats.

These centers would serve both as direct research centers, as well as coordinating centers for ongoing and new research at other government agencies and research facilities.

Let me also point out to my colleagues that there is ample precedent and experience within the VA for providing them with this new or expanded mission.

Through their extensive medical research programs, the VA already has expertise in diagnosing and treating viral diseases with devastating health consequences, such as HIV and Hepatitis C.

Furthermore, the VA currently operates two war related illness centers tasked with developing specialized treatments for those illnesses and injuries particular to war time.

In essence, these new centers would similarly study those illnesses and injuries most likely to come from a terrorist attack using a weapon of mass destruction.

I would also like to recognize at this point Ken Mizrach, the Director of New Jersey's VA Health Care, who will be testifying later on in the hearing.

Ken was an invaluable aid and help in helping to secure antibiotics for the postal workers who were potentially exposed to anthrax in New Jersey.

Just to recap, briefly. Around 6 p.m. on Tuesday, October 23, in the heat of the anthrax crisis, my office received a panic phone call, informing us that the hospital that had been tasked with treating postal employees would run out of Cipro within 24 hours, leaving hundreds of postal workers without access to this prescribed medication.

Immediately, I called Ken, who offered his full assistance and cooperation, without any hesitation.

For the next 3-plus hours, Ken worked the phones, and I, I worked the phones, as well, but he was able to make contacts with VA and others.

Finally, we had it set, or he had it set to bring Cipro, some 50,000 tablets, from a VA cache out in Illinois. It would have been there the next day, as those postal employees showed up for their medication.

But, thankfully, other phone calls he made finally yielded the CDC to bring forward the 50,000, and I was amazed that we had to do this. Why wasn't this just a given?

In conversations that I have had with the Postmaster General, in his office 2 weeks ago, he told me they had a similar incident here, where 250 or so postal workers went to the place where the medication was to be disseminated, only to find there were no bags of Cipro available.

They went back on the bus, very discouraged and worried for an additional 24 hours, until they got it.

Again, I want to thank Ken for his work and I do think the VA is a much under-utilized asset in this entire endeavor, and, hopefully, all of the policy-makers, not just on this committee, but our new head of the Home Land Security, Tom Ridge, who used to serve on this committee and others, will realize they need to use this great asset. It is our fourth mission.

Again, I want to thank the Chairman for having this important hearing, and yield back.

Mr. BUYER. Thank you, Mr. Chairman. Mr. Evans.

OPENING STATEMENT OF HON. LANE EVANS, RANKING DEMOCRATIC MEMBER, FULL COMMITTEE ON VETERANS' AFFAIRS

Mr. EVANS. Thank you, Mr. Chairman.

Terror has reached the home front, and we must be prepared. Building a more robust medical capacity to deal with domestic terrorism is one item we can afford.

Our medical people must recognize biological, chemical, and radiological agents and their effects. They must be able to treat these medical problems that result from that exposure, and they must report their findings so that patterns, if present, can be detected.

It is fine if they ask, "Was this terrorism," but in the initial stages, that question may be overshadowed by the immediate need to recognize, report, and treat the problems caused by these agents.

Because the problem may not be readily apparent, it may take days or weeks to determine that the cause was terrorism, in fact.

Enhancing medical training in clinics, clinician understanding is an essential step to treat the consequences of terrorist attacks that employ NBC agents.

With more robust training in the medical schools, physicians will be better prepared. As a result of enhanced training and ability to recognize, treat, and report, surveillance will be enhanced, surveillance not only for the problems springing from those specified agents, but surveillance for infectious diseases, as well.

This will strengthen our medical capacity nationwide.

Just two other points I would like to raise. We worked together on the Persian Gulf War issue, of whether agents had been used against our troops, and that was a long, tough battle to follow through on, but I respect you for leading that charge and I think it gives us a better base of information now that we consider the most recent crisis.

I think the Admiral deserves a round of applause for the work that he has done, and all his staff, during this very difficult period.

Admiral, we salute you and thank you very much for helping us out through this tough time.

I yield back.

Mr. BUYER. Thank you. Mr. Hill?

Dr. Snyder, I would like to thank you and your colleagues, as the original co-sponsor of the legislation, as the ranking member, along with John McHugh. And to all the witnesses, this is how we make law. We bring in the experts. We lay out a marker. You tell us what you think about it, give us your expertise. We go back and we rework legislation. That doesn't mean we have all the answers, and your expertise will be very helpful to us as we try to improve public health.

I now call our first panel, and we will ask for Dr. Cooksey.

STATEMENTS OF HON. JOHN COOKSEY, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF LOUISIANA; HON. DAVE WELDON, A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA; AND JOHN F. EISOLD, ATTENDING PHYSICIAN TO CONGRESS, REAR ADMIRAL, UNITED STATES NAVY MEDICAL CORPS

STATEMENT OF HON. JOHN COOKSEY

Dr. COOKSEY. Thank you, Mr. Chairman. It is good to be back. I was a former member of this committee in my first term, and it is a very important committee. You do great work.

I want to open up by saying that health care, medical education, medical treatment is really an emphasis of the times that the education is being rendered.

When I was in medical school in the 1960s, the emphasis was on cancer, heart disease, infectious disease. I was in a city in New Orleans where both medical schools had schools of tropical medicine, because of our proximity to the Central and South American area, where they have a lot of infectious diseases.

When I was in the Air Force, we dealt with nuclear accidents, not the bombing itself, but just the accident that could occur if someone let a nuclear weapon roll out of the back of a truck or an airplane, and it was called a broken arrow.

I happened to be on the IG team the last 6 months I was in the Air Force, and I was at a base in southern California, and a former medical student, a classmate of mine was there, and I failed him and his whole organization because they did not meet the criteria for helping a broken arrow, and he is still mad at me about it.

But those were the times that we dealt with. The times are different. The age of innocence for the United States and the rest of the world in regard to terrorism is over.

In 1980, I was in Europe doing some surgery lectures in the U.K. and in Germany and I was struck by the fact that I went through the airport there and I saw armed guards with machine guns.

It took us 20 years before our terrorism reached the point and today we have armed guards with machine guns.

Well, what about medical education? What is the emphasis of the time for the 21st Century?

I feel that your legislation is on the leading edge of the times, and I think it is very germane legislation. I think it could be very important legislation.

The emphasis now will have to be on weapons of mass destruction, of course, bioterrorism.

We have entities and agencies within government that are in a position to do this and have already made plans to do these. I visited the CDC last Tuesday. I understand that another political figure was there 2 days later, the President of the United States, the Commander in Chief.

But they do great things at the CDC in Atlanta and they actually have plans, contingency plans, and yet I feel that they could and should and will be an important factor in our future plans in dealing with weapons of mass destruction.

But what about VA hospitals? What about VA education? The two medical schools that are in New Orleans and the medical schools all over the country, in most cases, have a VA hospital, a Veterans' hospital in proximity of those medical schools.

The VA hospitals provide a major part of the educational process that medical students learn when they are in these medical schools, and yet the military, Department of Defense VA hospitals, provide something extra that we often do not get in medical school.

This goes back to the history of military medicine. As bad as wars are, there is usually something good that comes out of wars and there is some learning that is done out of each war.

If you go back to Napoleon's time, it was Napoleon's medical personnel, his physicians and surgeons who learned the importance of debreed, we call it debreedment, and if someone gets a wound, we now clean up that wound.

I never did this while I was in the Air Force. When I was working in East Africa, I helped take care of a person that stepped on a land mine, and that is a cruel weapon, and you spend a lot of your time debreeding what is left of the limbs and the extremities and the face after a land mine injury.

The great scourge of the Civil War was similar injuries and there, in that war, there were a lot of amputations done, some that were necessary, some that maybe were not necessary, but that was something that came out of the Civil War.

World War I, there were more people that died in that time period from influenza, the great influenza epidemic of that period than died from World War I.

World War II, the great medicine that came out of that was penicillin. It was the first really good medicine.

The Vietnam War, when I was in the Air Force, when I was in the military, when Dr. Snyder was in the military, he was a Marine then and the Marines are the guys that eat bullets, not us Air Force guys.

But the thing that came out of there, from a health care standpoint, was triage and treatment of trauma.

Well, I think it is very appropriate that your legislation be directed at this current problem of our times, which is weapons of mass destruction.

I think, however, that I would urge you, as you consider this legislation, to do everything you can to bring all of the existing agen-

cies and organizations that are in place to coordinate their efforts, and I think that it is perfectly appropriate that, as your legislation directs, that the Department of Defense, the Uniformed Services University of the Health Sciences, which is basically military for soldiers, be actively involved in this.

And this is not just because of the historical tradition, but it is because people in uniform have to have this.

But bring in the CDC, bring in the medical specialities, bring in the AMA, and bring in all the wonderful resources we have in this country, and we can face the scourge of our time, which is terrorism, bioterrorism, weapons of mass destruction that are inflicted upon civilians and military people, as well.

So I compliment you on your legislation. I think it is germane, it is important, and, most importantly, it will save lives.

Thank you, Mr. Chairman.

Mr. BUYER. Thank you, Dr. Cooksey. Adm. Eisold.

STATEMENT OF JOHN F. EISOLD

Adm. Eisold. Thank you, Mr. Chairman. I am Dr. John F. Eisold, Rear Admiral, Medical Corps, United States Navy, Attending Physician to Congress.

On October 15, 2001, my office, along with the Capitol Police, responded to an anthrax incident in Senator Daschle's office.

Thank you for inviting me to share with you some of my thoughts about our response and the importance of education and training in consequence management.

Issues regarding weapons of mass destruction do not merely involve security issues with investigative and prosecutorial components.

They are true medical events that require specific clinical response that must be taught, learned, and practiced.

It is no different than learning how to approach other medical conditions, such as heart disease.

The management of WMD events occurs at several levels, which include preparation, first response, public health response, and individual provider response.

While each individual level requires a different knowledge base, a basic level of understanding is required by everybody.

Let me briefly review each level.

My office provides the first responses for all medical emergencies and WMD events on Capitol Hill. To be ready for such an event as the October 15 anthrax incident, my personnel have had regular training in responding to chemical and biological terrorist events.

This training has been done in coordination with the Capital Police.

In addition, we had an initial cache of medicine readily available to use in such an event. My office also had adequate testing supplies and had already identified a reference lab capable of processing samples.

Furthermore, relationships were in place to be able to tap into a full Federal or local health department response should backup have been required.

This was our state of readiness on October 15. In a situation where an incident can rapidly overwhelm the resources of an individual clinic, such as mine, rapid reinforcements are necessary.

Within a day, we began to coordinate our efforts with Federal resources. Soon, the Office of Emergency preparedness, under the Department of Health and Human Services, the Centers for Disease control, the National Institutes of Health, Department of Defense personnel from all uniformed services, and multiple additional government labs were available for consequence management.

The Commissioner of Health for the District of Columbia offered assistance on the first day of the incident. I indicated that I would rely on the Federal response, not knowing what was about to befall the District.

Overall, the support I got was immediate, adequate, and reflected a superb level of preparedness on behalf of the Federal Government and the Department of Defense.

This is the standard for which state and local governments should strive.

Health care providers must acquire the knowledge to be able to handle the medical consequences of WMD incidents. Victims will present in offices and emergency rooms for treatment.

Signs and symptoms need to be recognized, diagnoses need to be made, and proper protocols and algorithms need to be employed to ensure quality and expeditious care.

Although the body of knowledge exists and many guidelines already are available, the importance of including this knowledge in continuing medical education has been lacking until now.

My experience with the October 15 anthrax incident has been gratifying with respect to the professional way in which local and distant providers responded.

They wanted timely information and up-to-date, up-to-minute guidance. They wanted to share with each other and learn from our experience.

Numerous phone calls and a daily District-wide conference call addressed many probing issues, as providers struggled to provide their patients with the best medical care.

In fact, on October 27, I spoke at an infectious disease symposium on bioterrorism, with over 400 people in attendance.

The events surrounding the October 15 incident demonstrated pressing need for heightened awareness within the medical community.

Health care providers throughout the country have proven to be eager self-starters, who will learn if given the tools and opportunity.

I have been involved with medical education throughout my career, now serving in my 25th year as a member of the teaching faculty at the Uniformed Services University of the Health Sciences (USUHS).

WMD issues have been a part of the medical curriculum at USUHS and the curriculum provides a template for our Nation's medical schools and graduate medical institutions.

The entire medical community must take the lead in the development of such training, however. Medical curricula, rigid as they

can be, follow tried and true academic principles that respond to the needs in the community.

For instance, when I was in training, alternative medicine, nutrition, genetic engineering, et cetera, were not in my medical school curriculum, but they are now.

When a valid medical training need is identified, the professional organizations that guide medical training, like the AMA, the American Association of Medical Colleges, numerous specialty societies, the Accreditation Council on Graduate Medical Education, the Liaison Committee for Medical Education, resident review committees, et cetera, will find ways to incorporate such training into standard curricula.

Medical educators and health care providers are dedicated professionals who will do the right thing and accomplish this vital task, I am sure.

In summary, the October 15 anthrax incident on Capitol Hill highlighted the need for training in WMD threats for the average practitioner.

I am sure there is a need for many local health departments and first responders to look at their preparation, as well.

These WMD issues are daunting, but manageable, with proper training.

Clearly, there is a need for a partnership between the medical community and Federal, state, and local agencies. It is an important task ahead and I hope that the proper balance can be found.

Thank you.

[The prepared statement of Adm. Eisold appears on p. 72.]

Mr. BUYER. Thank you. Dr. Weldon.

STATEMENT OF HON. DAVE WELDON

Dr. WELDON. I want to thank you, Mr. Chairman, for inviting me here to speak. and I want to commend you on the work you did in drafting this bill, and I also want to commend the gentleman from Arkansas, Mr. Snyder.

I have instructed my staff to sign me onto the bill. I think it is a very good legislative product.

I additionally want to associate myself with the remarks of Mr. Evans of Illinois, commending the House Attending Physician on the work he did, and I want to just add to that the tremendous help of Dr. Greg Martin and his work. He is the Chief of Infectious Disease at Bethesda.

I know when I was getting a lot of questions from colleagues in the House about these issues, he was very helpful to me as a resource that I could go to and then disseminate information to members of the House.

I attended medical school at the State University of New York at Buffalo, School of Medicine. The VA Medical Center is right across the street.

I did a fair amount of my training there at the VA Medical Center. This is not unique throughout the United States. You highlighted this issue in your opening comments.

There is an intimate relationship between the VA system and medical education throughout the United States, and that is why I think the VA can be used as a resource by the Federal Govern-

ment to get information out to the medical profession on the critical issues of nuclear and biological and chemical terrorist attacks.

I attended medical school on a health profession scholarship with the United States Army and did my internship and residency at Letterman Army Medical Center.

I received some nuclear, biological, chemical, we called it NBC training while I was on active duty, and I must say that the students—and this was back in the early 1980s, as the first graduating class from the Uniformed Services University of the Health Sciences (USUHS) was just entering their residency, and I did my residency with some of them.

And the training that they received at USUHS, I thought, was very, very helpful to the mission of the military when I was on active duty. They clearly had a better knowledge base of these kinds of issues.

So their ability to export the information that they have, I think, could prove to be very, very useful.

When I left the Army, I went into private practice and I did primary care, but I was in large medical group and we had one infectious disease specialist in the group, and I was paired up with him on the call schedule and I covered him on weekends.

So by virtue of that, I ended up having to cover him when he was on vacation and every other weekend. So I ended up having to become somewhat conversant in that specialty arena, reading the infectious disease literature.

Now, at that time, most of the things we were dealing with was AIDS and certainly it wasn't this kind of issue.

But nonetheless, I think I can bring a little bit of perspective to this whole discussion that you are going down.

As a health care professional, as a physician, as somebody who has some experience practicing infectious disease and primary care, and I would say, basically, this.

I think your bill, as drafted, is a fairly good product. The only constructive thing that I would add is the possibility of you bringing in the Secretary of Defense and the Secretary of the Veterans Affairs, I would consider bringing HHS in.

They have a lot of expertise in this arena. Training medical students and residents I don't believe is going to be adequate. We are going to need to train practicing physicians out there and that is where I think the agencies under HHS can be helpful, bringing some of the resources they have to bear to get practicing physicians trained.

I would just add a couple of additional points. Primary care providers, the focus should be on early recognition and management should be focused, I think, particularly, in the case of biologicals, to specialists in infectious disease.

A good example, as I understand, one of the early cases that came in the hospital down in south Florida, it was, I believe, a primary care physician who actually admitted the patient, recognized that he had a pneumonia, and then an infectious disease consultant was actually called in, and that is the kind of scenario you could see playing out in some of these cases, where a primary care provider is the one sort of on the front line and the specialist is the one who is actually following up on it.

With that, I will close my opening comments, and I would be very happy to field any questions, if any of you have any for me.

Thank you very much.

Mr. BUYER. Adm. Eisold, you mentioned that a basic level of understanding is required by everyone in the medical field.

Let me say this to the three witnesses. What we are trying to envision here is something that sometimes causes a paralysis.

As Americans, we can focus on something at the moment and we can be very good, but then when there is a calm, we relax ourselves.

We can focus and fight a war and then when the war is over, we think we can disarm and things are going to be just fine and we go do something else.

The vision I have of this is that the military health delivery system always must have the focus on military medical preparedness.

So as we coordinate this afternoon, we will coordinate with the Health Subcommittee of the Energy and Commerce Committee, which is developing this comprehensive legislation, we will coordinate, and I take your recommendations to heart.

We are coordinating with Secretary Thompson of HHS, with Dr. Don Henderson, who is the director of the newly created Office of Public Health Preparedness, but there is something about having DOD and the VA work with those 80 teaching hospitals that are out there.

Dr. Weldon or Dr. Cooksey, have you been through any of these teaching hospitals? Do you have some expertise that you can share with us?

Dr. WELDON. I have, yes. I think you are absolutely right, and I was alluding to that in the beginning of my opening comments.

I can just hearken back to my medical training in Buffalo. The VA hospital was right across the street. It was huge, and a substantial portion of the faculty at the medical school had staff positions at the VA.

The way I see it is the DOD has a lot of the expertise and you can take the knowledge and expertise in the DOD and help move it into the VA system, and through the VA system to you have the ability to get it out throughout the medical profession.

I could very easily see, at most of the VA Medical Centers, a symposium being put on in the next 6 to 12 months, where physicians in the community will be able to come in and attend a course, get continuing medical education credits for it, and get basic training on the whole gamut of issues.

In the case of primary care providers, they need to be able to recognize things like tularemia, anthrax, smallpox, diseases they have never seen, and they need to be able to recognize it in a very early stage.

I think there has to be more sophisticated training for infectious disease specialists and public health officials in how you manage these diseases as people progress through the normal cycle of the disease and the public health response, but the VA, I think, is extremely well positioned to play a very, very critical role.

If you want to quickly get people educated, the VA, coordinating with America's existing medical colleges, they can educate a lot of people very, very quickly on these issues.

Dr. COOKSEY. Let me respond to your question, too.

As a practical matter, the hospitals, the civilian hospitals in this country, the civilian health care, is going to be focused on the diseases that patients come in with, and that emphasis is going to be on something other than patients that are victims of weapons of mass destruction, bioterrorism, chemical, infectious disease, and so forth.

So that is the reason we have always had to depend on the military.

I spent a lot of time on infectious disease when I was in school in New Orleans and then I worked in East Africa. I was in Sierra Leone last year on a ward where they had something similar to the Ebola virus.

When you are exposed to these, you learn to take precautions and you usually come out without getting an infection, but even though I have been exposed to a lot of this and been involved in management of some of these patients, when this problem occurred, we all turned to the military man, to Adm. Eisold, who is really a physician who had the expertise, and he responded, and I think the people in the military responded, the CDC.

The public looks to the government for solutions to problems like this.

So I think that is the reason that this is very appropriate and it should be done. It is just that as a practical matter, civilian hospitals are not going to put a lot of resources into this when they have got patients coming in with cancer, high blood pressure, heart disease.

But we have got to be prepared and I think it is appropriate that the VA or the DOD do it.

Mr. BUYER. Adm. Eisold, you mentioned a couple of professional organizations that guide medical training and said that they will find ways to incorporate such training into a standard curricula.

They have had the knowledge for some time, but they have chosen not to include it into a standard curricula.

We don't want to mandate curriculum upon the medical schools, but I do realize that when there is a nexus in place as VAs, as teaching hospitals, we can be very persuasive to make sure that that is done.

That is why we are proposing that this become a pillar, the foundation for which other schools could follow.

Your opinion is welcome.

Adm. EISOLD. I would agree with you. The VA does provide a very good focal point, where you can incorporate into the curriculum probably a lot easier than other places, and work, for example, with USUHS, which has a curriculum already, and to be able to get the ball rolling.

In terms of the motivation to study this in medical schools, it is not as high as it has been on the radar screen, so to speak. It has not been there until now.

The urgency with which to do it comes from the individual practitioner.

Again, I was very proud of all the doctors in the local area. They just want to take care of their patients and if they don't have the tools available to them, they can't.

So once they recognize the need, they tend to drive the system through the professional organizations and on down.

I would like to think that without mandates, that medical schools will rise to the occasion.

In point of fact, the word WMD just gets in the way of things. In point of fact, we can legitimize the medical principles that are involved here. If it is a chemical burn, it is a burn, it is a burn that is taken care of any other way.

These are infections and infections cause fever and pneumonia, skin rashes, and so on.

The medicine and the medical principles are not different. It is just a matter of highlighting a couple of basic principles so that people are more aware of what the particular diseases are.

But the management principles are unchanged. So I think once people get over that hump that WMD is something really just associated with the military and think of it as medical issues, we are away ahead of the game.

Mr. BUYER. Thank you, Doctor.

Ms. Carson, recognized for 5 minutes.

Ms. CARSON. Thank you very much, Mr. Chairman.

First and foremost, I want to replicate the sentiments in terms of Adm. Eisold, my high regard and my heartfelt appreciation for all that you do for the United States Congress.

It is unsurpassed, and I want to personally thank you for being there.

Number two, when I was going to church on Sunday, this blurb came over the radio about another office in the Longworth House Office Building, where my offices are, that had been found to be positive for anthrax.

My staff keeps asking, "how secure can we feel?" We were out of Longworth and then we were all cleared to go back in Longworth, and then there were more spores found.

Can you respond to that, please?

Adm. EISOLD. I certainly can respond to that. As you recall, the Longworth had three offices that had what was felt to be cross-contaminated mail contamination, three offices out of the entire building.

While those offices were being isolated, accidental contamination happened to a fourth office. So that I just want to put that in perspective, that that was not something that just all of a sudden happened from some other letter or whatever.

It really was an accidental response from the workers.

But to answer the more fundamental question, once you have that cross-contamination evidence in the building, is the rest of the building safe to go into?

I say yes, and I felt that way. That is why I toured the building, when we reopened the building, and made sure that the places that were isolated were secure and welcomed everybody else back in the building.

There is a law of difference between the spill in Tom Daschle's office and the things that we are seeing in the post offices in the local area, and whether it is New Jersey or here, as you tumble downhill.

So that I think that that is where all of us need to be reassured and follow the science, that here we are 4 weeks out of the incident here on the Hill and although we tested only 6,000 people here who turned up negative all over the Hill, there were at least another 10,000 workers on the Hill at that time.

Now, we continue to worry about whether anybody is going to become ill, but at the same time, as time goes by, you do become increasingly comfortable that even though there may be spores around, the public health risk has significantly decreased.

Ms. CARSON. One other quick question, Adm. Eisold.

I see changes around the Capitol complex, the barriers, security checks, missing shrubbery, et cetera.

What kind of training is provided to your staff in the event of a conventional terrorist attack? If you are able to share that with us.

And in your opinion, should mass casualty care and other conventional medical responses be included in any terrorism response curriculum?

Adm. EISOLD. Right. I think that when I say WMD, I would include the regular terrorism with explosions and that sort of trauma, as well.

Again, I would indicate that medical school curricula actually is very good at this in terms of that is your basic triage, your basic surgical techniques, and that sort of thing, which is already in the curricula.

So that I am comfortable that that part of it is well spoken to. It is the local health department response, to a large degree.

But otherwise, I am comfortable about that sort of thing, because that is good basic surgery, and I would defer to a surgeon.

Ms. CARSON. I wanted to ask Dr. Weldon a question, in the time that I have left.

Dr. Weldon, the first cases of anthrax exposure and illness were your home state.

In your opinion, were the lines of communication between the various Federal, state and local agencies up to the task of recognizing and reporting and treating these cases?

Is your district better prepared for the next WMD terrorist attack?

Dr. WELDON. That is an excellent question. I think, initially, they were not.

A lot of what has been going on throughout the Nation is learning as we go.

However, once they began to recognize what they were dealing with, I think they responded extremely well. I think legislation is needed and any legislative product that we pass out of here, out of the Congress, should include a significant amount of funding for some sort of a state block grant, because it ultimately falls to the local health departments.

As you are probably familiar, in the counties in my Congressional district, we have emergency response centers and they are geared up to deal with hurricanes, in my case, in Florida, or floods maybe in other areas.

I think we need to have nuclear, biological, chemical capabilities in these state offices, in these county offices that we develop.

Can I just add a few comments about the Longworth situation?

Anthrax spores are about a half a micron in size. A micron is a millionth of a meter. A meter is about a yard in size.

An envelope is a weave of cellulose fibers that has sort of like a basket weave that has gaps that are 50 microns in size.

So those anthrax spores in that letter, in all the letters, the one that went to New York, the one that went to Florida, and the one to Daschle's office, they were able to freely move out of that envelope every time the envelope was touched or manipulated in any way.

An anthrax spore is almost like a gas. If I had some in this cup and I took the top off, they can actually start floating out. You just agitate it a little bit and billions of them can start going in the air.

When they discovered anthrax in the Longworth building, as I understand it, and the doctor can elaborate on this actually more than I can, they swabbed these desks and then they had basically like little four-by-four gauzes and then they put them in a test tube with some solution, spun it down in the centrifuge, and extracted fluid out, and then they put it on culture plates, and, in all of these cases, they got very few colonies.

So it all suggests that there were very, very low levels of anthrax in those offices and based on my medical knowledge, I am not sure they actually constitute a health threat.

Very, very small levels of anthrax spores, unless it is actually introduced into an open wound on your skin, does not consist of a significant health threat.

Anthrax exists in the soil. There are certain areas of the country where it is there. Now, not in the spore form. It is in the bacillus form in the soil.

I just say all this to reassure you that I believe Adm. Eisold's office is handling all of this appropriately and the evidence, possibly even including the anthrax that they are discovering in some of the other Federal buildings in the area, like the State Department, could all be cross-contamination from that one heavily laced letter that went to Senator Daschle's office.

Now, they need to go through all the other mail and see if there are other letters and we need to take all the necessary precautions, but based on the data that I have looked at, the evidence suggests, at least in the Longworth Building, it was cross-contamination.

Ms. CARSON. Thank you.

Mr. BUYER. Thank you. Mr. Smith, recognized for 5 minutes.

Mr. SMITH. Thank you very much, Mr. Chairman.

I want to thank our very distinguished panel for their excellent testimony, and the two docs who sit in the House of Representatives are always providing their expertise. I think, a wealth of information, particularly on matters relating to health and medical science, and today is no exception. So we are very grateful for your testimony.

Adm. Eisold, I want to thank you especially for your professional, effective responsive, and, above all, your leadership.

It probably saved, and this really has not been, I think, said enough, you probably saved, by your preparedness and by your prompt action, the lives of several Senate staffers.

We know certainly from the Brentwood and the Washington experience, where there have been two deaths attributable to inhalation anthrax, thankfully, the inhalation anthrax cases in New Jersey, which were a little bit after down here, they have responded.

But your prompt action, especially since the letter, the Daschle letter was opened and it became obvious that, there were airborne particulates and airborne anthrax, probably saved the lives of several staffers.

So for that, you deserve the highest praise and gratitude of everyone who works here and their families.

So, again, I want to thank you especially.

Let me also just ask a couple of very brief questions.

We had a hearing of the full committee about a month ago and I asked a number of questions then about the whole issue of detection, and the answers were not fully addressed, because I think we are all in a learning curve here, but recently Congressman Weldon from Pennsylvania brought in a number of the providers or the manufacturers of these different detection devices for both chemical and biological.

One of those, the ruggedized advanced pathogen identification device, a 50-pound suitcase-sized device that can tell in a matter of minutes whether or not you've got some smallpox or some other problem in proximity to where the testing is occurring.

We know that anthrax isn't contagious, but smallpox and a whole host of other things are, and this could be the precursor and the harbinger of a lot of other terrible things that could be unleashed.

It seems to me, and I would appreciate your insight on this, that we need to get into some heavy duty procurement of these kinds of devices, obviously pick the best of the best, get the best price, but get them out there in post offices, in buildings, in any site where there is a high level of risk.

The second question would be in the area of first responders.

Obviously, you and your staff were adequately prepared, but it seems to me that other agencies, including our Capitol Police, may not have, or maybe they do, the kind of training, especially when you have a contagious situation, like smallpox or some other device or that might be chemical.

The issue of cross-contamination. The CDC in our area said no problem, there is no cross-contamination, and it seemed to me to be a no-brainer that if you have an envelope that is filled with this one micron sized anthrax, that some might be on the outside, some might bleed through the envelope.

I tried for 2 weeks to get the feeder stations that feed into Hamilton Township checked and I was told repeatedly no problem, there is no cross-contamination.

Finally, when we got it, after making a big fuss about it, they found anthrax in four of those downtown stations, and these are large post offices, obviously, but they feed into the larger Hamilton facility.

So cross-contamination is something you might want to speak about.

Finally, two things. Centers of excellence, the bill that I have introduced, if you have any thoughts. Would the VA be a good place

to put them, HHS, where? Because it seems to me we need to have a Manhattan Project type focus.

Vaccinations? Are they something we should be promoting? And then lessons learned, which basically your testimony is, but if you could speak to some of that.

Adm. EISOLD. The learning curve is steep right now, and maybe I will go from the reverse forward.

I think the idea of centers for excellence and a Manhattan Project is obviously a good idea, and just bring all the parties to the table and figure out what the right balance is and how to put that together, because there are a lot of good people who are trying to think of the same thing and the last thing we need is duplicative efforts. We just want to get the right job.

The issue of cross-contamination, again, that learning curve went up real fast, and so that there is no question about that.

The question that we are dealing with now is, and Dr. Weldon alluded to it, is just how significant is it. How far, once you tumble down the mail system, is that letter medically significant anymore?

The spores, you are never going to get. They are going to be out there, to some degree. But at some point in time, they are insignificant.

The question of detection, there is a flurry of activity, as you can imagine, in terms of research for rapid detection. So that I would agree with you. Whatever device just needs to be refereed very well, before we wholesale buy lots of them, but definitely.

And in terms of local training, it goes right down to the county level. You have to have some sort of a response at the county level to an event happening in your post office or someplace.

Mr. SMITH. The first responders.

Adm. EISOLD. The first responders. First responders, and right down your local volunteer.

I would leave the vaccination issue to CDC, because that is a king-size issue that takes a great deal of thought.

Dr. WELDON. I just want to add a couple of things to what Adm. Eisold said.

Whenever you start vaccinating large numbers of people, even low incidence adverse events become much more common because you are vaccinating large numbers of people.

So if you've got a vaccine and only, say, one in 10,000 people has an adverse event, well, if you go out and vaccinate a million people, suddenly you are going to have a lot of folks with an adverse event, and that is the issue you get into when you start talking about vaccination.

On these rapid detection devices, the main thing that limits them, they were originally developed for combat applications, the main thing that limits them, most of them just detect a protein on the coat of the viral or bacterial particle.

They have to get a lot on them to get a positive. So if you just have very small quantities in the environment, some of these devices—now, the particular product that was mentioned, it may perform better, but anything we look at in terms of a big Federal effort to go out and buy lots of these detectors, that has to be done very, very carefully, so that they are used properly and that they are going to work the way we intend them to work.

To just put one of these things in a post office is not going to work. You are going to have to put it in a place where it is going to come in contact with mail or it is going to be in very close proximity to mail as it moves through a machine.

Mr. BUYER. Thank you. Mr. Hill.

OPENING STATEMENT OF HON. BARON P. HILL

Mr. HILL. Thank you, Mr. Chairman. I want to thank the panel for coming and, in particular, Adm. Eisold. I want to thank you for being a common voice in all of this.

I know my staff and myself, quite frankly, on October the 15th didn't know what we were dealing with and you provided a very steady voice and gave us the reassurances we needed, and I want to thank you for that.

In reading through my notes here and the materials that we have, I notice that staff has made the comment it has become very apparent that our health care professionals across the country are not armed with the proper tools to diagnose and treat suspected exposure to weapons of mass destruction.

Do you agree with that statement?

Adm. EISOLD. I would to that statement, to the effect that they don't associate the different types of weapons of mass destruction with actual clinical principles they already know.

So that it is not that hard for people to adopt their basic medical principles. They just need to know the vocabulary of weapons of mass destruction and learn a few extra bacteria in their armamentarium.

So I think it is their unfamiliarity with what they are dealing with. They actually have the tools at their hand medically to take care of the issues.

Mr. HILL. Well, what do we need to do then to develop that vocabulary from a Congressional point of view?

Adm. EISOLD. I think it is a multi-leveled approach that begins with the medical schools. I think the training programs that are in graduate medical programs and the VA, in particular, play a role and then continuing medical education.

Physicians are educated throughout their lives, as I say, self-starters, and they pick up on what is going on in the community.

The chairman indicated before, and he is right, that things kind of go way up to the top and then they trickle down later on.

So it is a matter of keeping the momentum. It is hot right now, and I would just as soon not see a further boost, but it still needs to be in the curriculums.

Mr. HILL. Are you saying it is going to take care of itself, you think, because of the motivation within the medical community or do we really need to be doing anything?

Adm. EISOLD. I think you definitely do need to be doing something, yes. There is a lot of motivation to follow, but they need some leadership, as well.

Mr. HILL. Let me switch gears here, if I might. I have learned more about chemical weapons and biological weapons than I really care to know about in the last month.

But a lot of the meetings that I have been in, there are conflicting testimonies.

I was in a meeting the other day where so-called experts said that we should not be taking Cipro, that it is a huge mistake, a big mistake for us to be taking this.

Do you disagree with that?

Adm. EISOLD. Again, it is strictly a very straightforward medical issue. When the outbreak began, we did not know what the sensitivity of the bacillus was going to be.

So you take your strongest drug initially until you find out, and it takes about a week or so until you get what are called MICs, which give you the minimum concentration of an antibiotic that will kill the anthrax spore.

Once we found that out, after a week, we switched to doxycycline. And you are right. There are many misleading conversations about that, but it is very straightforward.

At this time, we have pretty much switched over to doxycycline, because we know the bug is sensitive to it.

Mr. HILL. In another meeting that had, as a matter of fact, I had this meeting yesterday, the comment was made that the threat of chemical attack is greater than the biological attack.

From a medical perspective, without going into the specifics, what is more practical than another, medically, do you think the chemical attack is more threatening than a biological attack?

Adm. EISOLD. We know that biological agents, by and large, are more difficult to engineer and disperse.

The group in Japan that released the gas, the sarin gas in the subway, they tried eight times to release anthrax. So it is not that easy.

But there are people smart enough out there to be able to do either biological or chemical.

I personally would not make a distinction between the two in terms of feeling reassured about one over the other.

Mr. HILL. On the House floor, when you were reassuring us that things were going to be okay, you made the comment that an anthrax cloud hovering over the City of Washington, DC was not, I forget your exact words, but was not going to happen, I think was the intent of your comments.

In one of the meetings that we had, from a so-called expert, he said that that was entirely possible.

Could you comment on that?

Adm. EISOLD. I think there are some practical aspects to that. Once you take a cloud of anthrax, it disperses. It becomes less dense.

The second thing that happens, it is out in the sunlight, which degrades it. We know that ultraviolet light degrades a bare spore.

The other thing that happens is once you start to get these things up in the air for long enough, they begin to change their electrostatic charge. They attract dust. They become something different than they were originally.

So just whipping it out in the air over a city is a lot less practical than what happened here.

Mr. HILL. I want to get the staff's question in here, too. So let me read it.

If the Capitol complex were the target of a biological, chemical, or radiological dispersal event and became a dirty environment, are

you prepared to treat contaminated victims? How? Where? How would you protect your staff? Do you train in chemically protective gear, and should you?

Adm. EISOLD. I guess the answer is yes on all those accounts. We all have protective gear and we work closely with the Capitol Police.

In a situation like that, they would be essentially the people that go in the hot zone, keeping medical personnel outside the hot zone so they can take care of casualties, and we have a very orderly way of then proceeding to, depending on the size of the events, local decontamination or we tap into the resources around here, whether it's the VA, the local hospitals, the civilian hospitals, Hospital Center, G.W., Walter Reed, Bethesda.

And we have a wonderful strike force in Northern Virginia and a sea berth team with the Marines in Indian Head, Maryland.

So there is a whole coordinated response should something happen.

Mr. HILL. Thank you, Mr. Chairman.

Dr. COOKSEY. Mr. Chairman, could I comment on that?

With all due respect to the concern about Members of Congress and the staff, I really have full confidence in the people that are here, led by Adm. Eisold, and there are great medical schools here, and that will be taken care of.

Our primary responsibility as Members of Congress is to be concerned about our constituents, and therein lies the greatest weakness.

When I was at the CDC, they said the biggest problem out there is that there is a great disparity in the local health units, county health units.

They said in some cases, for example, in New York, they said they had found there were people in Manhattan that were top notch people, they were ready for anything, and yet there are some other parts of the country that have totally inadequate county health units.

So if we go back and do anything in Congress, and they suggest that the need was about a half billion dollars, about $500 million dollars, in funding, Federal funding, that would go back to these local health units and then the local health units respond to the state health units and on up.

And we can provide the leadership here in Washington, but we really need to be concerned about our constituents, because I have full confidence that those politicians, these politicians, or us politicians are going to take care of ourselves.

But we really need to be concerned about our constituents and there is a need there to do something, and I think that can dovetail with your legislation, too.

Mr. BUYER. Mr. Hill, if I may.

Dr. Cooksey, then in this comprehensive bill that we are putting together in the Health Subcommittee of the Energy and Commerce, would you concur with Dr. Weldon that we need a block grant piece?

Dr. COOKSEY. Absolutely. That was the message I got from the CDC. I think we need to give the CDC about another billion dollars and about half of that needs to go to rural health units.

I would encourage everyone to go down to the CDC. They are doing great work down there. It is a unit that was set up, it was originally a malaria treatment unit during World War II, but they have got great scientists down there and they are doing great things.

We have got a lot of the entities in this country that can help solve this problem, and they actually have part of their organization that addresses chemical warfare and some of these other things, but perhaps your legislation can do a lot toward bringing this together, to get the right type of coordination and leadership.

Mr. BUYER. Thank you, Dr. Cooksey. Dr. Snyder, recognized for 5 minutes.

OPENING STATEMENT OF HON. VIC SNYDER

Dr. SNYDER. Thank you, Mr. Chairman. Adm. Eisold, you made a comment with regard to medical education, which is the focus of the chairman's bill, is that medical education, medical schools, VAs are responsive to changing medical situations.

I know a few days ago, in Little Rock, our medical school infectious disease man put on an interactive televideo conference with staff, I think, both doctors and lay folks at 30 rural hospitals, and just to talk about the different infectious agents in this new environment.

One of the specific issues that has come about on this bill is some have said that the bill ought to not just concentrate on terrorist potentialities, but just talk about or concentration on all infectious diseases.

My own inclination is I like the language of the bill that focuses on potential bioterrorism and other terrorist events.

Do the three of you have any comment about that?

Adm. EISOLD. I think that I would agree with you, that I think that those words are important. But at the same time, again, as I mentioned before, the issues we are talking about are just good basic medicine.

There are just unusual bacteria that we don't normally think of, but I think we do need to heighten our awareness and connect it to terrorism.

It is bioterrorism and I think we ought to be up front about that.

Dr. SNYDER. Another question I want to ask is with regard to what you just repeated then, again, medical principles.

But it seems to me the value of Mr. Buyer's bill is to recognize that, yes, the principles may be the same, but the applications can be different.

For example, if I have a patient who comes in to see me who is sick, I am going to assume most patients want to get well.

I used to work the emergency room. If somebody passes out in public, the ambulance brings them in. If they are alert enough, I can do a history.

I am going to assume they want to get well. If, in fact, we get into the situation of a smallpox, suicidal person, whose goal was sent here to infect as many people as possible, the history is not going to be reliable.

In fact, the person may want to check themselves out of the hospital as soon as possible or lie about why they are starting to break out, or you take an anthrax and you do an occupational history.

In the past, we have really thought about people involved in livestock and those kind of things. I think now the application of medical principles may be, no, you have to think about political staff.

Not us. Nobody in this room opens the mail, I don't think. It is our young staffers that open the mail or people connected with the media, high profile figures, trying to learn from what has occurred in the last month.

So while the principles are the same, they have different applications and the textbooks may be out of date in discussing those diseases.

That, to me, seems to be the value of having this, whether it is the chairman's bill over here or this subcommittee chairman's bill that focuses on bioterrorism and some of these other dimensions of these bacteria.

Do you have any comments?

Adm. EISOLD. Again, I would agree with you, and that comes down to having a wider vision when you take your history.

I will just give you one example. Anybody, at this point in time, who has looked at the Daschle letter would know that that is a letter that you never open.

But that is a process of education. That letter should have been weeded out down the pike. It has got all the earmarks of something that you shouldn't open on your desk.

As I say, the learning curve is steep, but it has to do with personal awareness. And in the providers, personal awareness that the case presenting to you may have many levels that are not just clinical, but also political, to guide you.

Mr. HILL. Dr. Cooksey, Dr. Weldon, do you all have any thoughts about the language of the bill that specifically focuses on terrorism as opposed to all infectious disease agents?

Dr. WELDON. Yes. I believe that if you extend the scope out too far, it could dilute the ability to get people educated quickly.

I agree with the sentiments that have been expressed that some of the educational process is going to occur spontaneously.

I think an excellent example is cutaneous anthrax. Vic, you have gone to enough conferences where you know dermatologists love to show their slides, and I would imagine that every dermatologist in America who gives a lecture is going to throw in a spoof or a fooler and throw up an anthrax cutaneous eruption and ask people what they think it is.

But in terms of the whole gamut of issues here, recognizing the early stages of smallpox and all of these other things, I think it is going to require some very, very focused education and that the language in the bill is crafted properly.

If I could, I want to just comment on Baron Hill's question about the cloud of anthrax issue.

Biologicals, at least as I was briefed, were developed with an intent to disable your opponent in a field of battle. They were not intended to be used against population centers.

The reason for that is it is difficult to do, and I think Adm. Eisold explained some of that.

These terrorists, their intent is to sow terror in our heart and they have done it fairly effectively by putting a few envelopes in the mail.

But they are both, in some ways, sophisticated, in some ways, very crude. They took down the Twin Towers, but they used very crude methods, knives to hijack airplanes, slamming airplanes into buildings, and ditto with the anthrax.

They just put it in an envelope and sent it through our postal system. To disperse anthrax in a cloud over a population center requires a much higher level of sophistication that, to me, while it is possible for terrorists to grow anthrax with a relatively low level of knowledge and limited amount of inexpensive equipment, to develop the technology to disperse it effectively over a population center requires a whole higher level of knowledge and expertise.

I don't think it is something we should discount as impossible, but the greater likelihood is more very, very limited events that really have not a tremendous amount of public health threat associated with them, but are intended to really scare people and undermine our will to fight.

That is where an educational process like this, where you get all the providers out there educated, can be very, very helpful in early recognition and, in particular, you get the public health officials engaged and better management at the community level can be very useful.

Dr. COOKSEY. Dr. Snyder, I want to throw out a vignette that I would trust your judgment on.

In the Air Force, we had veterinarians who were involved in public health, infectious disease, and the Army does the same thing.

Veterinarians deal with anthrax. In fact, I was at a veterinary school event 2 weeks ago and I probably learned more there from the veterinarians than all the reading I have done, because animals, particularly, you have areas in Texas, for example, that they have to deal with anthrax.

I talked to one veterinarian who has treated a couple of cases. He says that when he sees an animal, a cow that has died, there is blood that has come up from his mouth and from the lower end of the alimentary tract or the GI tract, that is anthrax until proven otherwise.

But anyway, one of the considerations you might do, and I would point out that I asked Adm. Eisold if, in the Navy, there are any veterinarians, and he quickly told me no.

I guess he says that we have more animals in the Marines and the Army and the Air Force than they do in the Navy, whatever he meant by that.

But anyway, you might consider bringing the vet schools into this sphere, because they are very actively involved and they really know a lot about anthrax and a lot of other infectious diseases and could be an important part of this epidemiology team, because that is what the whole issue is, is working out the epidemiology.

Once you work out the epidemiology, as you well know, then you can make the diagnosis and the treatment.

Dr. SNYDER. Thank you.

Mr. BUYER. Thank you. I had originally asked Dr. Snyder to testify before the committee and he had declined and deferred, yesterday on the dais.

I would like to extend a special appreciation. Dr. Cooksey of Louisiana, Dr. Weldon of Florida, and Dr. Snyder of Arkansas, your expertise and your leadership, you have done your constituents proud, and your state, and I appreciate working with you on this legislation.

Adm. Eisold, I join my colleagues in their praise and admiration for your leadership and your work. I believe that the recommendations that you have given to the Congress for us, you thought of public safety and health first when you gave the recommendations to the leadership for us to let's stop and get everybody out of the buildings and find out what we are dealing with.

I think that your prudence was wise and I commend you for it.

With that, I dismiss the first panel. Thank you.

On the second panel, we recognize Dr. Susan Matcha, Infectious Disease Specialist from the Mid-Atlantic Kaiser Permanente Medical Group.

We also recognize the Honorable Clay Shaw, Congressman from the 22nd District of Florida, to introduce his constituent, Dr. Carlos Omenaca, Infectious Disease Specialist from the Miami Heart Center, in Miami, FL.

Mr. Shaw, I will begin with you.

OPENING STATEMENT OF E. CLAY SHAW, JR., A REPRESENTATIVE IN CONGRESS FROM THE STATE OF FLORIDA

Mr. SHAW. Thank you, Mr. Chairman. I would like to congratulate you and the members of this committee for holding this particular hearing.

It was a pleasure for me to sit here and listen to the good professionals that are colleagues of ours, together with Adm. Eisold, who certainly has given us all much comfort and confidence during this process.

We are indeed the people's House and that means that we not only have the common man, but we also have highly qualified professionals among us, which, I think, speaks very highly for the House of Representatives.

Florida had the distinction of being one of the first places where anthrax was found, and I have with me today one of my constituents, who we are very proud of, who treated one of the first victims.

I would like to, at this time, just take a minute to properly introduce him and his qualifications.

This is Dr. Carlos Omenaca. Remember that pronunciation, Omenaca, because you are going to have to say it before it's over with.

He will serve as an expert medical witness on this second panel.

I commend the Oversight and Investigations Subcommittee for calling upon Dr. Omenaca, an infectious disease specialist, to share his expertise in treating the second victim of anthrax attack against the American Media, Inc. in Boca Raton, FL.

We must be sure that our Nation is adequately prepared to provide speedy and appropriate medical tests and treatment for future bioterrorism victims, so we must be willing to do a straightforward

and honest assessment of what was done right in the Florida health care providers' handling of these anthrax cases.

Even more importantly, we must determine that more needs to be done to ensure the authorities at the Federal, state, and local levels have sufficient resources and coordinating plans in place to respond to this kind of attack in the future.

Along those lines, I compliment you, Mr. Chairman, for the bill that has been under discussion here today.

I am pleased to introduce Dr. Carlos Omenaca, who has treated patients at Cedar Sinai Hospital, Miami Heart Institute, since February of 1998.

Dr. Omenaca is board certified in critical care medicine, infectious disease, and internal medicine. He has taken time away from his quite busy medical practice to share his experience, both the positive aspects which resulted in the successful recovery of a 73-year-old patient in his care, and the negative aspects, which the VA and Department of Defense must learn to overcome if faced with future biological attacks.

Thank you, Mr. Chairman.

Mr. BUYER. Thank you. With that, Dr. Omenaca, please present your testimony.

STATEMENTS OF CARLOS OMENACA, M.D., MIAMI HEART CENTER, MIAMI FLORIDA; AND SUSAN J. BERSOFF-MATCHA, M.D., MID-ATLANTIC PERMANENTE MEDICAL GROUP

STATEMENT OF CARLOS OMENACA

Dr. OMENACA. Mr. Chairman and members of the committee, thank you for inviting me to testify at this hearing.

I am Carlos Omenaca, M.D., an FCCP specialist in infectious diseases and critical care medicine, practicing in Miami, FL, and I was directly involved in the diagnosis and treatment of inhalation anthrax in one of the cases recently diagnosed in Florida.

I was asked to share my personal experience in the management of such an unusual case in order to place in perspective and review the roles of the Department of Veterans Affairs and Defense in educating the Nation's medical students and current health professionals to diagnose and treat casualties when weapons of mass destruction have been used.

What if you were confronted with a large number of people suffering from an unknown severe illness? How would you decide what they were suffering from? How would you determine if a biological weapon was involved? How would you treat them? How would you keep the disease from spreading to others?

These are all questions that belong to the introduction section of a course in Bioterrorism and Biological Warfare.

None of them crossed my mind 6 weeks ago when I was asked to evaluate a 73-year-old man admitted to the hospital with a severe case of pneumonia. What initially looked like a flu-like illness and evolved to a rapidly progressing mycological pneumonia was confirmed days later as the second case of inhalational anthrax, the third case in 25 years in the United States.

As a result of that initial suspicion of a possible second case of anthrax in the same place of work, the level of awareness in the Nation for a potential bioterrorist attack increased dramatically.

Hundreds of people were tested for possible exposure to the anthrax bacillus. Only a few tested positive.

Of those, few acquired infection and only four died from a lethal and rapidly progressing infection.

People receiving prophylactic antibiotics are counted in the thousands. Our patient, managed by a multi-disciplinary team, was discharged home in good condition after 23 days of hospitalization, including several days of stressful care in the ICU.

Several other patients diagnosed of inhalational anthrax were recently released home safe.

These facts seem, on one hand, concerning and even frightening, given the large number of people potentially exposed to a lethal infection.

On the other hand, they may resemble something close to a success story, given the low number of casualties in people infected with the real infection.

However, the truth is that behind those statistics and success stories, there is a tremendous amount of frustration, confusion, lack of information, and, in some cases, chaos.

We were just lucky enough to have not lost more lives during these weeks. In my opinion, we are not sufficiently prepared for a large or even small-scale bioterrorist attack.

Our medical personnel, including myself, do not have the training to recognize illnesses that have not occurred in this country in decades.

Smallpox, anthrax, plague, Q fever, tularemia, brucellosis, viral hemorrhagic fever, botulism are among the pathogens utilized as biological weapons.

We rarely see these infections in this country in the 21st Century. They are not emphasized in the core curriculum in our specialty programs.

Remember, you do not diagnose what you don't think of and you don't think of what you don't know about.

Some of the clinical presentations are almost forgotten in our most recent medical publications.

Some of them, as we are currently seeing in the cases of inhalational anthrax, are being updated in terms of the clinical presentations, newer diagnostic tools, such as DNA testing and therapeutic means with the latest groups of antibiotics.

Research is needed to test these antibiotics against biological warfare agents.

The degree of awareness of a potential bioterrorist attack is key in the prompt diagnose and successful management of potential affected people.

Early treatment makes a difference in devastating infections, such as bubonic plague or inhalational anthrax.

Without this level of continuous awareness, infections caused by biological warfare agents will not be timely diagnosed and lives may be lost.

Continuous medical education aimed at all practitioners would serve as a tool organized toward the diagnose of future exposure to biological agents.

A greater degree of coordination between doctors directly involved in the management of patients suffering from a bioterrorist attack in official institutions is needed.

I detected potential deficiencies in communications between clinicians, health departments, and perhaps the CDC. They all should work together in a very standardized and coordinated effort.

Our doctors need training when it comes to a team effort with these institutions with which they do not work in their daily practice.

Teaching specifics about medical ethics to keep classified information confidential, while keeping patients and families punctually updated about their clinical condition are needed.

Our health care workers do not seem prepared to deal with unknown infections. I have seen tremendous confusion and stress among nursing staff caring for our patient diagnosed with inhalational anthrax in Miami.

I sense the same degree of concern, lack of information among most of the nurses in our emergency departments and ICUs. They have not been trained to care for these type of patients.

Our laboratory technicians and ancillary personnel have been overwhelmed by large numbers of samples reaching the premises for testing.

I was sensing lack of standard procedures and perhaps some degree of disorganization when samples were collected, labeled, and sent to outside laboratories for special testing during the management of our patient with anthrax in Miami.

I would not be surprised if similar situations have occurred in New York, New Jersey, and Washington, DC. A greater degree of coordination is needed when two or more institutions are involved in the care of screening people potentially suffering from a bioterrorist attack.

Written policies to these respects should be implemented.

In summary, a number of potential deficiencies in our system have been recognized within the management of a patient diagnosed with anthrax in Florida. All of them are the product of inexperience in treating such cases.

Most of them are easily amendable by implementing written policies and enhancing our educational system.

Strategies that assert further this caution and possible incorporation to our educational programs would include, among the others, the following.

Incorporate a comprehensive introduction to bioterrorism and biological warfare as a new subject which should be part of the curriculum in medical school, residency, and fellowship training programs.

Dedicate special attention on the diagnosis and management of individual pathogens used in biological warfare when studied as part of the current curriculum.

Prompt review of the medical literature and updates on diagnostic and management strategies for each individual agent identified as a potential biological weapon.

Incorporation of mandatory CME credits for all practitioners in the United States as part of their licensing requirements.

Establish written policies aimed at coordination of communications between clinicians and government officials.

Create an educational program on biological warfare aimed at nursing staff and health care workers, including laboratory technicians and ancillary personnel.

It is vital that prompt action take place in order to better deal with potential future exposures to biological agents.

Mr. Chairman and members of the committee, I am honored to be asked to testify today in this hearing. I would be happy to answer any questions the committee may have.

Thank you.

[The prepared statement of Dr. Omenaca appears on p. 75.]

Mr. BUYER. Thank you, Doctor.

Dr. Matcha, you are recognized for testimony. Good morning.

STATEMENT OF SUSAN J. BERSOFF-MATCHA

Dr. MATCHA. Good morning. Mr. Chairman, members of the subcommittee, I am grateful for the opportunity to share my experience as an infectious disease specialist in treating two of the patients who contracted inhalational anthrax.

My name is Dr. Susan Matcha. I am a physician with the Mid-Atlantic Permanente Medical Group and one of more than 11,000 Permanente physicians nationwide who provide care to over 8 million Kaiser Permanente members in eight states, including Maryland and Virginia, plus the District of Columbia.

I practice as part of a team, with other specialists and sub-specialists. The integrated care we provide to Kaiser Permanente members provides us with broad support and resources, which has meant rapid consultation among specialists, the ability to develop and disseminate practice guidelines, and to have coordinated collaboration with the Centers for Disease Control and other public health authorities.

Immediately after the tragedies of September 11, the threat of bioterrorism suddenly became real. The seven infectious disease physicians in my department reviewed the state of our knowledge about different biological agents. We consulted textbooks, the medical literature, and the CDC web site to increase our understanding of all bioterror agents, including anthrax, botulism, smallpox, tularemia, and others.

Kaiser Permanente already had developed clinical practice guidelines for bioterrorism as part of our emergency preparations for Y2K.

Our infection control committee updated them soon after September 11. While we hope our work has contributed to the public health, my principal responsibility is caring for patients, and I would like to share with you a brief chronology of the care provided to the two patients I personally treated.

Patient number one came to the Kaiser Permanente Woodbridge Medical Center on Friday, October 19. He had been ill for 3 days with fever, malaise, muscle aches, and sweats.

The internist who saw the patient was concerned about the severity of his symptoms, since the patient suspected he had been exposed to anthrax.

Even though a call to the health department confirmed that Brentwood was not a known exposure site, he sent the patient to the hospital.

The emergency room physician at Fairfax Hospital drew blood for routine tests, as well as for cultures, and, also, ordered a chest x ray, which showed some extra shadows in the middle of the chest.

Because of these shadows, a CAT scan of the chest was also performed. The findings were thought to be consistent with anthrax and the patient was started on IV Cipro.

Shortly after midnight, Saturday morning, I was called about the patient. The CDC and health department had already been notified.

Within 11 hours, the blood cultures were growing an organism consistent with anthrax. The blood was sent to the CDC and the Virginia Department of Health for confirmatory testing.

I maintained constant contact with the CDC. We discussed adding additional antibiotics to the Cipro, which is the only FDA-approved antibiotic for treating anthrax.

The CDC made some treatment suggestions based on theoretical evidence and what is known about the behavior of similar organisms.

However, no one really had any experience treating human anthrax patients. Ultimately, as the treating physician, I was responsible for writing the orders and caring for the patients.

I added Rifampin because it worked well fighting many gram-positive organisms. It has the ability to penetrate white blood cells to kill organisms that have already engulfed.

I also added Clindamycin because it has been shown to interfere with toxin production in other types of bacteria.

Patient two called our Kaiser Permanente medical advice line on Saturday, October 20. The advice nurse was concerned about his symptoms of headache and fever and referred him to a physician at our Falls Church Medical Center Urgent Care that afternoon.

The physician there was concerned that the patient may have meningitis and sent him to Fairfax Hospital for a spinal tap.

The emergency room physician called me with the results and mentioned, in passing, that the patient was a postal worker. I asked him to find out exactly where the patient worked and when I heard Brentwood, I asked him if the patient had a chest x ray, and he had not.

I advised the physician, first, to obtain blood cultures and then to immediately give the patient a dose of IV Cipro and once this had been done, the patient was to have his chest x rayed.

The chest x ray was difficult to interpret. So a CAT scan was done. The results of the CAT scan were similar to the first patient's. Both showed enlarged lymph nodes in the chest, as well as pleural effusions, or collections of fluid in the space surrounding the lungs.

Fifteen hours later, patient number two's blood cultures also returned with gram-positive bacteria consistent with anthrax.

At that point, I added Rifampin and Clindamycin to his regimen, as well.

In addition to the numerous calls I made to the CDC and health department that weekend, I also called the chief of our infectious disease department to let her know about the two patients.

She helped organize Kaiser Permanente leaders for a conference call to update our clinical practice guidelines. These guidelines were key to educating all Permanente physicians nationwide.

In the early hours and days after the first anthrax cases were diagnosed, our guidelines were updated to reflect any knew knowledge, as well as the frequently changing recommendations, and they have since been updated 15 times.

We were also able to recognize the pattern of the Brentwood postal employees. As a result, we called all 237 Kaiser Permanente members employed at the Brentwood facility by phone to assess their conditions and ensure they received the care they required.

The events of the weekend of October 20 were stressful and humbling. We were confronted with a disease that few other clinicians had ever seen. We felt a responsibility not only to our patients, but also to the broader medical community, and we have taken numerous steps to share our experience.

We have posted our guidelines on the Kaiser Permanente web site, where it is available to physicians across the Nation, as well as to the general public.

We have responded to numerous inquiries from clinicians across the country, and, finally, we have written an article for the Journal of the American Medical Association on what we learned about diagnosing anthrax, and we are currently working on a second article to discuss what we learned during the hospital course.

When and if other physicians are faced with anthrax, they can benefit from what we have learned.

I have submitted a written statement that describes in more detail how we addressed the challenges we faced over the last month in caring for patients suffering from inhalational anthrax.

Again, thank you for inviting me to speak to the subcommittee, and I would be pleased to respond to any questions you might have.

[The prepared statement of Dr. Matcha appears on p. 78.]

Mr. BUYER. Mr. Shaw, I want to thank you for bringing your witness here today and introducing him to this subcommittee.

Both of you, I noted, in your bios, are internal medicine, with sub-specialities in infectious disease.

For that, your patients are alive today. The great concern that we have is that you are a sub-specialty. You are a specialty in a sub-specialty, and there are many treating physicians out there all across the country.

Dr. Omenaca, you testified that you got the third case in 25 years. Is that what you said?

Dr. OMENACA. That is correct. There was one case about 25 years ago and the second case in American Media, and the patient I was taking care of was the third diagnosed case. Yes.

Mr. BUYER. Well, both of you are a compliment to your specialty for saving your patients' lives.

Dr. Omenaca, according to newspaper reports, in one patient's case, Mr. Blanco, you utilized a textbook that was written in 1901 to help confirm your diagnosis of anthrax.

I would like for you to tell us whether or not that was true.

Also, when did you first suspect that your patient was not suffering from flu or other upper respiratory conditions?

Dr. OMENACA. The 1901 book is not entirely true. I did review several books during my first contact with the patient, and it was not exactly that book.

That book I saw a few days later after the patient was discharged, that particular book. In that particular book, there is a good description of the clinical presentation of my patient.

I did see some symptoms and some relevant information in other books. There was a particular book, edited in 1985, from Barcelona, that described differently the presentation.

There was another book, edited in 1951. Actually, it was the Internal Medicine Book, the Cecil Book, that also mentions a clinical picture similar to my case.

Mr. BUYER. What caused you to think inhalation anthrax? Did some other doctors look at something and think meningitis or other things?

What caused you to think inhalation anthrax?

Dr. OMENACA. The link was a phone call from my patient's boss, who had been in contact with Mr. Stevens, the first case of inhalational anthrax.

Both of them had similar presentation, with confusion and disorientation, and both of them were taken home by this person, and he called me saying maybe your patient has the same thing.

So then I started to think of inhalational anthrax, although the presentation was nothing to do with what I had found in the medical literature.

Mr. BUYER. Dr. Omenaca, in your testimony, you made several recommendations, including the need to create a bio warfare program also aimed at nursing staffs and other health care providers.

Could you give a recommendation to us about the education level of training, differentiating it, what we say to our physicians versus to the nursing staff, or should it be the same?

Dr. OMENACA. First of all, all physicians should have, all of them should have some kind of training in identifying these potential biological agents, making more emphasis in family practitioners and primary care and ER physicians, because they are the first line care givers in our community.

Then they will refer to infectious disease for further evaluation, but they need to have a good knowledge of how these infections present, and it should be in-depth.

Secondly, health care workers, they need a lower level of training, but they need to know the basics of clinical presentations, as well.

Mr. BUYER. Dr. Matcha, what are some things that you would have liked to have learned in your medical training that could have better prepared you for the situation?

Dr. MATCHA. I am not sure there is really anything that could have prepared me for this situation. I think that the learning curve has been very steep, and we are truly learning as we go along.

I think that as physicians, we tend to seek out information. I had been thinking about this long before I saw my first patient, as my family and friends and patients would come and ask me questions about anthrax.

So I think that this is something we had all been thinking about and in preparing, we all started reading.

Mr. BUYER. This question is really to both of you. Whether it is your internal medicine or as a sub-specialty on infectious disease, how much time did you really spend on anthrax?

Dr. OMENACA. It is very little time. It is an infection that is described in the books that you never see.

Therefore, it is part of a chapter that you review along with four or five different other pathogens.

Mr. BUYER. If you look back into your education.

Dr. OMENACA. Yes.

Mr. BUYER. How many minutes do you think you spent on that subject?

Dr. OMENACA. A few minutes.

Mr. BUYER. Just a few minutes?

Dr. OMENACA. A few minutes. Everything that is in the book, they are not stressed. They are not emphasized. They should be emphasized.

Mr. BUYER. That is our point in particular here. If both of you were on the front line, and they treated the anthrax, and you not only went to medical school, and then you learned internal medicine, and then you did a sub-specialty in infectious disease, and you got 2 minutes on anthrax, what do you think about the medical students that then go into the family practice out there?

Did they get 30 seconds? Maybe not even that.

Dr. OMENACA. Something like that.

Mr. BUYER. All right. A question to both of you. What resources would you like to have had at your disposal that either of you, as you look back, wasn't available or easily accessible?

Dr. MATCHA. I think there was a lot that was easily accessible. By the time I saw the first patient, the CDC was right there already. The health department was right there.

Then, actually, I received a phone call from a specialist from the military who offered to help.

So people sought me out.

Mr. BUYER. Who was that individual, from where?

Dr. MATCHA. Arthur Friedlander, from Walter Reed.

Mr. BUYER. From Walter Reed. Is he also a specialty in infectious disease?

Dr. MATCHA. I am not sure if he is a specialist in infectious disease, but I know he has a specific interest in anthrax.

Dr. OMENACA. I know him. He contacted me, as well, and he is someone who has devoted a lot of research, especially in monkeys, in anthrax.

Mr. BUYER. So your expertise was coming from DOD.

Dr. OMENACA. He did a lot of research on monkeys. He had never seen one case in humans.

Mr. BUYER. So he was also anxious to see and talk to you. I can understand.

Let me yield to Ms. Carson for questions she may have, because I have a second round of questions.

Ms. CARSON. I will be quick. Let me say I am not really being combative here, because I realize this is an emerging kind of crisis that we face, and I internalize most things, because I begged doctors everywhere to check my heart and was on the verge of a massive heart attack, and just in time, got saved. They dismissed it.

So I am wondering what you have learned since Florida, where there were obviously signs of this problem with your patient.

Doctor, you might want to follow that up, too. I have to admit, my own internal bias is that I try not to impose upon you at this particular time, because you are both human beings first and doctors second, and I respect that.

But what have you learned and what has been disseminated by your experience in Florida once that issue surfaced for you?

Dr. OMENACA. First of all, it is about medical knowledge. It is there. It is hiding in the corner.

It has to come out. We have to review the literature on every and each one of the biological agents, put it in our curriculum, review it with our professors, with our residents, with everyone.

Number two, some of the agents are very old. They have been treated with old antibiotics. There are no studies done on newer antibiotics.

Remember, we have anthrax being treated with Cipro, when it could be treated with other fluoroquinolones, same group of antibiotics.

They need to be tested.

Number three, it is difficult for a physician who is in a daily practice to deal with such an unusual case, with all the circumstances, have to deal with the CDC, with health department, have to talk to every one of them every hour for the first couple of days, when you feel like you are shying away from your management of the patient.

At some point, you are asking yourself, who is treating the patient, is it me or is it them. You have to create some kind of coordinated effort between those institutions and yourself.

There are many more things that could be explained, but these are the main lessons.

Ms. CARSON. Did either one of your patients suggest to you I they have been exposed to anthrax?

Dr. MATCHA. The first patient that we saw did. He didn't tell that to me, but apparently he told that to the emergency room physician.

Then the second patient that I saw worked at the same postal facility, and once we see one person, the index of suspicion goes up immensely.

Ms. CARSON. I can't hear you. I'm sorry.

Dr. MATCHA. The first patient that we saw was suspicious that he had been exposed.

Ms. CARSON. And what happened?

Dr. MATCHA. I don't know. He didn't tell that to me. He told that to the emergency room physician.

The second patient worked at the same postal facility and because of that, we had a much higher index of suspicion to begin with.

Ms. CARSON. So when the first one said he or she thought there was some exposure there, what happened, the first one?

Dr. MATCHA. We took him seriously and he had blood cultures and a chest x ray and had all of the appropriate tests.

Ms. CARSON. And what happened? Did you verify it at that point?

Dr. MATCHA. Yes. Yes. We had CAT scan findings and chest x ray that was consistent with anthrax.

Ms. CARSON. So what happened to him?

Dr. MATCHA. He was hospitalized and received IV antibiotics and he was discharged from the hospital yesterday.

Ms. CARSON. What happened to the second one?

Dr. MATCHA. He also received IV antibiotics and was discharged——

Ms. CARSON. Immediately.

Dr. MATCHA. Immediately. Yes. And he was discharged from the hospital a few days ago.

Ms. CARSON. So both of them. Those are the only two you had.

Dr. MATCHA. That is right.

Ms. CARSON. And they are both doing okay.

Dr. MATCHA. That is right.

Ms. CARSON. Thank you very much. Mr. Chairman, I am going to yield back.

Mr. BUYER. Dr. Matcha, Kaiser Permanente has an impressive set of guidelines for the treatment when there is suspected exposure to anthrax.

When were these guidelines first issued?

Dr. MATCHA. My understanding is that they were first put together as part of the preparedness for Y2K.

Then soon after September 11, they were updated, and then I participated in a conference call the weekend both of these patients were admitted to update the guidelines again.

Then ever since then, the guidelines have been updated almost daily, sometimes twice a day, to reflect new knowledge as it came through.

Mr. BUYER. Is there collaboration with the CDC?

Dr. MATCHA. Mostly we followed what the CDC recommendations were in terms of nasal swabs and changing to doxycycline from Cipro.

So there was some coordination with them as far as that went.

Then we also looked at the different sites that were being called exposure sites and those were put into the guidelines, as well.

Mr. BUYER. This goes to the next question, to both of you. It seems like the theoretical information flow is supposed to be the two-way street between those doctors in the field and CDC.

In your opinion, is there a two-way information flow? Is there actual sharing that occurs or do you think that it is more single directional from the CDC to you?

Dr. OMENACA. I think it is bidirectional. They were there and we were there. I was discussing the case on a daily basis several times a day.

There is one thing that concerns me and it is in terms of efficiency in releasing information from the lab. Sometimes it takes several steps for the particular doctor who is, for instance, in Atlanta or in Washington, DC and is not physically in the laboratory and has to take several steps for us to gather all the information.

This could be a potential problem.

But definitely it was directional. It was discussing the clinical case both ways, yes.

Dr. MATCHA. I would agree with that. I think that most physicians, when they are faced with a difficult case, like to discuss it with other physicians.

I was grateful to have the CDC there to guide me and to give me suggestions, but ultimately there is one person in charge, and, in the case of these two patients, that person happened to be me.

But I was happy to have all of the input that I could get from the CDC and the health department.

Mr. BUYER. Dr. Omenaca, you mentioned in your testimony, "continuous medical education."

Do you feel that physicians should be required to attend a re-certification or re-licensing course, much like teachers, and, if so, how often should practicing doctors be re-certified, and who besides practicing doctors should be required to attend the type of course?

I'm just throwing that out as a question.

Dr. OMENACA. Well, it is an idea. I will give you an idea. I think that this should be part of licensing requirements which are done every 2 years and all the practitioners should be required to have some kind of training in bioterrorism that reviews the most common agents in order to recognize those symptoms, because they are the first care givers, first line.

They are going to refer to infectious disease specialists for further treatment.

Mr. BUYER. I don't know how many will necessarily agree with your idea, but I appreciate your testimony.

You also, Dr. Omenaca, mentioned deficiencies in the flow of information. You mentioned one with regard to CDC and difficulties with regard to the labs.

But this information both before the initial diagnosis and after, do other doctors in the field notice the same things and what are some of your recommendations and/or theirs?

Dr. OMENACA. Number one, have the doctors who are first caretakers, who are taking care of the patient, have some kind of written policy and have the position, the role to be more active?

Number two, those clinicians should have direct access to the results from the lab, from the CDC, instead of having to discuss the case and to pull the resource from other intermediate physicians.

Mr. BUYER. What would be your recommendations to the first responders?

In this legislation, I know your testimony is just about anthrax, but we are concerned about all other forms of contamination.

As we are putting together our legislation, what do you think the first responders should know, how best to protect themselves, as they also provide care for a patient, and how do we get that information out?

Dr. OMENACA. First responders should get, first of all, well informed about the diseases, as I just mentioned before.

Number two, immediately after a suspicion of some kind of possible exposure, they should contact, first of all, an infectious disease specialist and then possibly the health department, and that should be standard.

This is an idea.

Mr. BUYER. Dr. Matcha?

Dr. MATCHA. I think the first responders are probably the most important people who need to be educated. Certainly, it was the first responders in our patients' cases. That's the whole reason that they made it into the hospital to begin with, is that the first responders were concerned, and I think that is where a lot of the training needs to focus.

Mr. BUYER. With regard to others, if you have a radiological agent, obviously, if there is an incident, everybody is going to know perhaps what that is.

If you have anthrax, it might not be a few days.

But anything that requires some form of an incubation perhaps is a little difficult. The first responders aren't going to know. They may not be part of that process, which makes it difficult for you.

You become the first responders.

I am just trying to figure out, as we put together our education piece, sure, we focus on the medical situation and often we think of the doctors, but there are also the EMTs, and I am trying to figure out how we best provide, how that education function is going to work.

I would like to thank both of you for coming. I know that you have given a sacrifice from your practices to be here, but your testimony is extremely helpful as we try to put this together.

Congratulations for saving your patients' lives. Thank you. You are dismissed.

The third panel, I would like to recognize Dr. Frances Murphy, the Deputy Under Secretary for Health, Department of Veterans Affairs. I am going to ask her to introduce her staff.

STATEMENTS OF FRANCES M. MURPHY, M.D., DEPUTY UNDER SECRETARY FOR HEALTH, VETERANS' HEALTH ADMINISTRATION, DEPARTMENT OF VETERANS AFFAIRS, ACCOMPANIED BY SUSAN MATHER, M.D., CHIEF OFFICER, PUBLIC HEALTH AND ENVIRONMENTAL HAZARDS, VETERANS HEALTH ADMINISTRATION, DEPARTMENT OF VETERANS AFFAIRS, AND KENNETH H. MIZRACH, DIRECTOR, VA NEW JERSEY HEALTH CARE SYSTEM, VETERANS HEALTH ADMINISTRATION, DEPARTMENT OF VETERANS AFFAIRS; AND VAL G. HEMMING, M.D., DEAN, F. EDWARD HÉBERT SCHOOL OF MEDICINE, UNIFORMED SERVICES UNIVERSITY OF THE HEALTH SCIENCES, DEPARTMENT OF DEFENSE

STATEMENT OF FRANCES M. MURPHY

Dr. MURPHY. Mr. Chairman, thank you for the opportunity to testify to the subcommittee this morning.

I am accompanied today by Dr. Susan Mather, VA's Chief Public Health and Environmental Hazards Officer, and Mr. Kenneth Mizrach, the Director of VA's New Jersey Health Care System.

I will keep my remarks this morning very brief, but I have submitted a formal statement and ask that that be made part of the record.

Recent incidents involving anthrax exposure and infection have made clear the possibility of an attack on the United States with unconventional weapons, capable of inflicting harm that could be both widespread and sustained.

The medical consequences of such attacks could include both immediate trauma inflicted and the potential long-term health consequences resulting from that trauma.

In addition to the more obvious physical harm, there would be instances of often less apparent, psychological harm.

Psychological injury, such as post-traumatic stress disorder, may manifest itself long after the event.

It is of paramount importance that health care professionals throughout the Nation receive education that will enable them to better understand and respond to the potential health threats from such unconventional agents.

We strongly believe that all health care professionals, not limited to physicians, should receive this training.

Mr. Chairman, VA is a valuable national health resource, capable of providing significant assistance in developing and distributing the type of educational programs required.

We recently enhanced our own training programs to better prepare VA employees to recognize and respond to terrorist attacks.

We have the capability, through our education infrastructure and our education and research collaboratives, to share the programs that we produce with others around the Nation.

We are also well situated to reach a wide audience of practitioners and students through our academic affiliates.

Through these longstanding and close partnerships, we have played a leadership role in defining the education of future health care professionals to help meet the rapidly changing needs of the Nation's health care delivery system.

More than half of the physicians practicing in the United States received part of their professional education in the VA health care system.

In conclusion, let me compliment you, Mr. Chairman, and this committee for its proactive stance on these critical issues.

The provisions of these bills that we have talked about today will ensure that our Nation can mount an effective response to potential terrorist attacks.

Bioterrorism is a perversion of science. Through your legislative proposal, you provide a counter-balance by ensuring that scientists and health care providers will have the scientific knowledge to mitigate and fight terrorist threats.

You can be assured that VA stands ready to use our considerable expertise in clinical care, education and research to benefit Veterans and other Americans in this time of need.

I would be happy to respond to any questions that the members of the subcommittee have.

[The prepared statement of Dr. Murphy appears on p. 82.]

Mr. BUYER. Thank you, Dr. Murphy.

Now, I would like to recognize Dr. Val G. Hemming, the Dean of the School of Medicine, the F. Edward Hébert School of Medicine, Uniformed Services University of the Health Sciences, Department of Defense, USUHS.

STATEMENT OF VAL G. HEMMING

Dr. HEMMING. Thank you.

I am Val Hemming. I am a retired Air Force colonel, and I am the Dean of the F. Edward Hébert School of Medicine, named for Congressman F. Edward Hébert from the State of Louisiana, who really was responsible for the Public Law which established the University in 1972.

Thank you for inviting me to share my views regarding the present responsibility of medical educators to ensure that the Nation's primary care practitioners are educated, trained, and prepared for the challenges of people using science, as it were, as a terrorist weapon; that is, biologicals, chemicals, and nuclear materials.

Many have already mentioned our medical school and some of the things we do that I believe are unique. I would like to just give you a little bit of background; tell you a little bit about what we do at our medical school; and, share a little of that experience with you.

When the school was founded, military educational planners were aware of the fact that science could be used as a weapon and that, in the past, for example, in the first World War, that the opposing forces used phosgene and chlorine gas, that a number of microorganisms had been weaponized and were potential threats for soldiers or combatants.

We were aware, also, that in places throughout the world, chemical weapons had been used very recently to damage both combatants, as well as civilian populations.

Being aware of that, it became imperative, we believe, that military physicians or physicians, who were going to be practicing during much of their careers in the military, needed to be knowledgeable about these weapons to understand what the risks were for the use of these weapons, to be trained with the requisite tools to make a diagnosis, and to start treatment, if necessary.

I don't have time here to talk about the entire content of our educational programs regarding these matters at our medical school, but I can affirm for you that for more than 25 years, we have incorporated a body of WMD-related information into our core curriculum for first, second, third, and fourth year medical students.

Indeed, what we have done is woven into the basic science courses, that all medical students take, the principles and concepts of weapons of mass destruction.

So in their basic courses in anatomy, physiology, pathology, pharmacology and so forth, we relate these disciplines and this knowledge to issues of weapons of mass destruction.

We are preparing students to participate in two active field exercises where they must employ the knowledge and skills they have acquired at USUHS in the field setting.

Our first year students, at the end of a course in military medicine, spend a week at Quantico, Operation Kerkesner, where they actually practice the principles of early diagnosis, treatment, and decontamination of mock-up patients who have been exposed to WMD agents.

In the second year and again in the third year, specific things are done to train students for a fourth year exercise, where we go to the field at Camp Bullis, outside of Fort Sam Houston, where we conduct another large military exercise, Operation Bashmaster. This exercise includes the students employing the tools that we provided them in both diagnosis and treatment, and the treatment and management of patients exposed to such agents.

So I believe that we are probably the only medical school that does this, for good reason. For good reason, because that really is the mission entrusted to us.

Now, how should we proceed in the future? I think, first of all, that we have learned some things at our medical school which we might be able to share with others and are delighted and willing to do that.

We were delighted to be invited by the Veterans Administration to participate in a partnership to provide model programs that could be broadcast and shared with other medical professionals.

I believe something more should be done and my recommendation would be that a dialogue needs to be established with the accrediting agencies which oversee medical training in the United States.

All allopathic medical schools in the U.S. are accredited by the Liaison Committee for Medical Education (LCME), which actually establishes requirements for granting the Degree of Doctor of Medicine.

It probably would be worthwhile at this point in time to review those requirements with the LCME and to find an opportunity to include WMD training and to focus on training that is already given. Most physicians already learn a lot about WMD agents in medical school, but their focus is different. They are thinking about different things.

The training should focus on, and talk about, issues of probabilities, so that civilian medical students can learn to think the way we train our military physicians to think.

Secondly, a dialogue should be held with the Accreditation Council for Graduate Medical Education (ACGME), which accredits graduate education programs in the United States, to talk about the possibility of including some requirements in the general requirements for the accrediting of residency programs. Then we will know that all physicians in the U.S. have had some exposure to these concepts. They actually will be able to take the training that they already have and just focus it in a way to use that training better to respond to WMD challenges.

Finally, we would go beyond that to those who credential physicians to practice medicine. I would think that if those who accredit primary care practitioners to see patients in the hospital or clinics, through the Joint Commission on Accreditation of Healthcare Organizations (JCAHO), for example, that requirements could be put in the credentialing requirements to require all primary care prac-

titioners, who are the first responders, to have an annual or every other year update, to focus on these WMD issues, so that when patients appear with certain kinds of symptoms and syndromes, that the physician would think about the possibility of a terrorist attack or that someone is creating mischief in the community.

Finally, I think that because we have substantial experience in the Department of Defense, in the medical school, we have a number of subject matter experts.

We talked about Art Friedlander here, but there are many other Art Friedlanders in the DOD system who could be tapped and used in partnership with the university and the VA to create model educational programs to reach medical students, people in GME training, and those who need to be credentialed for primary care.

Thank you.

[The prepared statement of Dr. Hemming appears on p. 87.]

Mr. BUYER. Dr. Murphy, according to your testimony, Presidential Decision Directive 62 tasks the VA with training medical personnel at hospitals in the National Disaster Medical System to appropriately treat victims of chemical, biological, and radiological incidents.

You also mention that the VA recently received over $800,000 from HHS to begin the development of this training program.

My question is why did it take over 3 years to get this money from HHS and why did it take over 3 years for the VA to even begin the development of this type of a training program?

Dr. MURPHY. I don't have an answer to the first part of your question. We did get the funding from HHS on September 5, just prior to the September 11 incidents. We began development of that program by initiating an assessment of what the education needs are for the NDMS hospitals, and we will move quickly to implementing a program to actually train practitioners in those facilities.

Mr. BUYER. You also spoke about a conference on weapons of mass destruction for VHA staff, clinicians, and emergency managers outside the VA.

What new information do you expect to come out of this conference and how do you plan to disseminate the information in medical schools for inclusion in their curricula?

Dr. MURPHY. In order for an education program to be effective, we need to reach out to all health care professionals.

But in training physicians, I think there are important partners that we need to bring into the process.

We rely heavily on the expertise not only our university affiliates, but in of DOD. They are great partners for us.

We have reached out to our university affiliates. You will hear later this morning from Dr. Blaser, who is jointly appointed at NYU and the New York Harbor Health Care System in VA.

We need to bring everyone into the mix to develop the best training programs possible and in that way, we will address the needs not only of the university-based physicians, but the primary care practitioners in our urban and suburban areas, and physicians in rural areas, like some of the counties that you deal with.

Mr. BUYER. You mentioned a 12-hour series to be broadcast to VA facilities in November. It seems to me that it would be in the

public's interest to give this information to medical schools and hospitals over the country.

Was there a decision to limit the audience?

Dr. MURPHY. Not at all. The VA broadcast on chemical and biological terrorism agents is a one-hour program which Susan Mather moderated.

We would be happy to share copies of the videotapes broadly with universities, with private hospitals.

We broadcast that program on our satellite network, which is a digital satellite network and can be picked up by anybody who has a digital satellite receiver.

So it is widely available and we would look forward to sharing that program.

On November 28, the AAMC is going to be holding a conference and we would make all of our materials available to them, including the pocket cards (which your staff also have copies of) on biological and chemical warfare agents.

Those cards, as you can see, carry the emblem of both the Department of Veterans Affairs and the Department of Defense, and were jointly developed by our two departments.

Susan, I don't know if you want to add to that.

Dr. MATHER. DOD is sponsoring a 12-hour video conference on bacterial and chemical warfare agents, and that is widely available in this city and across the country in medical schools, and any physician can access that.

It can also be sent directly to a computer, so people can access that at their own computer.

We are taking advantage of that in VA and, of course, I am sure many physicians across the Nation will take advantage of what has been an excellent series in the past and I am sure will be this time.

Mr. BUYER. Have you been asked to address the AAMC conference?

Dr. MURPHY. We have received a letter of invitation and I and a member of Dr. Mather's staff will be attending.

Mr. BUYER. That is great. That is great. How many of these did you go to print?

Dr. MATHER. It seems to me it is 50,000 on the first print.

Dr. MURPHY. VA has several thousand hard copies. However, as you can see, at the bottom of the front page of that card, it can also be printed off a web site. VA will be happy to provide that widely.

So people can get copies of the pocket cards from us or print them themselves.

Mr. BUYER. How do you get these in the hands of docs all across the country?

Dr. MURPHY. I think the best way to do that is to work with each of the professional societies, to work with organizations like the AAMC, the AMA, JCAHO, the university, with other government agencies.

This is one example of a quick reference that I think is important to increase the confidence of our health care providers. We need to ensure that all providers have the information that will allow them to recognize these agents, to diagnose the related symptoms and illnesses, and to know what the effective treatments are.

Mr. BUYER. Can I ask, also, Dr. Mather, since you participated in putting this together.

The panel that came before you had the question about nurses, about other health providers who are the first responders, what about them in the inclusion of such dissemination?

Dr. MATHER. Of course, within VA, these will be widely distributed and will go to nurses and doctors and all health care professions.

I think in VA, we feel very strongly that this requires and we have a team effort. So it will have to go out to all of these.

These have even been fairly popular with lay people, who find some degree of comfort, I think, in seeing that these diseases are manageable, and that takes a part of the terrorist point out.

If people aren't terrorized by them, then they haven't been effective, and I think that this helps in people understanding the context of these agents.

I think, also, the NDMS system, we have area emergency managers in many of our hospitals who have partnered with the NDMS hospitals in their community and they have copies of this and are distributing them to the NDMS hospitals in their area.

Mr. BUYER. Thank you, Dr. Mather.

Dr. Hemming, in June 1998, an issue of Military Medicine, it was reported that—I would ask you to think about this, and then I want to ask the question—that 19 percent of the military physicians were confident about providing care, health care in NBC situations.

The majority of those confident few, 53 percent, were graduates of your medical university.

Would you like to comment on those statistics and numbers?

Dr. HEMMING. As physicians, we spend a lot of our time working with games of probability. As we think about the things that are most likely to happen, the things that we know, we also are likely to be good at the things we do every day.

So when we are confronted with the unusual, the unexpected, that creates a level of uncertainty and as other physicians here have said, we then have to turn to someone else.

We do a lot of consulting in medicine, because one person isn't a repository of all knowledge.

I think that our graduates are particularly unique. At the present time, we graduate about 160 physicians each year.

Over the last 20 years, our physicians, graduates, have come to represent about 20 percent of the active duty physicians in the military.

That means that 80 percent of the physicians in the military come from other accession sources, primarily from the health profession scholarship program, which means that they received their medical school training in other civilian medical schools.

About half of those accessions also received their training in civilian hospitals. Only one half are trained in Army and Navy and Air Force hospitals, because there are not enough trained physicians in the Military Health System (MHS) to train all of the physicians that are needed.

I would wager, that if one looked at who those people were who were uncertain, you would come to find that there were many of

them who were trained in civilian medical schools and did their residency training in civilian hospitals, and have only had to think about WMD issues when they put their uniforms on.

That perhaps, then, explains why the MHS educational system does not have a larger area of confidence among its physicians.

Again, it comes back to the issue of what those physicians are doing day to day, what their jobs are and what things they are obliged to think about.

An orthopedic surgeon who is doing trauma every day doesn't spend much time thinking about anthrax or about botulism.

But, if you are an infectious disease specialist or, more particularly, if you are doing primary care as an internist or as a pediatrician or as a family physician, you are more likely to think about those issues.

So if one were to target WMD education, you would target that education to the primary people who meet patients at the front door and not the neurosurgeon and not the orthopedic surgeon.

Those physicians also need to have a basic fund of information, I believe, and that is why I would argue that it should be included as part of their training.

But the neurosurgeon and the orthopedic surgeon are not going to meet the patient at the front door; whereas, the family physician, the internist, the emergency medicine physician will do so. That is where we ought to focus our training, to keep people current and focused so that they ask the right questions when the patient comes through the front door.

Mr. BUYER. The American Association of Medical Colleges, in 1998, stated that your medical university was the only one that could best prepare doctors and train them to respond to victims of weapons of mass destruction.

Is that still true today?

Dr. HEMMING. I think we have a unique role in that. I think that all medical schools can provide some level of that same kind of training.

Mr. BUYER. Well, they can. That means they are able. The question is are you the only one in the country who is providing this type of training and expertise.

Dr. HEMMING. I think we presently are, yes.

Mr. BUYER. Now, I need some help. I need the help of this panel and of the next panel, because this afternoon, we are going to sit down with the professional staff of the Health Subcommittee of the Energy and Commerce Committee and I want to make sure we do it right.

I don't have the answers here. So when it ends up in print, don't be yelling at me. I am going to try to get it right.

But I want to make sure. I don't know who is going to be the one here to—I'm going to talk aloud. I am just going to think aloud here.

Dr. Murphy, I had sort of a sidebar discussion with you. If we say to the Secretary of Health and Human Services, Dr. Henderson's new position, are we going to make him the point person, make him the rod of the umbrella, and somehow bring you under that?

I want to get away from these turf battles and turf wars and you are DOD, you are VA, they are HHS. We need to have somebody in control and in charge here and I need to find someone and pick someone to do that and then we will fund it, and then under that, they are able to tap into your resources, and yours, and we disseminate, and we move, and we educate.

See what I am saying? I am trying to figure out how we best do that, and, right now, I am thinking that Dr. Henderson might be the best person out there to lead.

So there is my question to you. Should I be doing that?

Dr. MURPHY. I think you point out an issue that is extremely important. This program needs effective leadership. I think that it could be tasked to any number of individuals, offices, or agencies.

But what is most important is that it not be a stovepipe. This program needs to cut across all of the relevant departments and agencies.

We need to bring our expertise to bear on this issue and it is important to make sure that all health care professionals are educated, because when you talk about front line health care providers, it is not only the doctors. It is the nurses, the PAs, the nurse practitioners, the folks in the laboratory, and, also, the EMTs, as was pointed out earlier.

We need to make sure that everyone in the health care profession feels comfortable that they could recognize and perform their appropriate role in caring for victims of terrorist attacks.

I think that it should not become an issue of who is in charge, but rather that we all need to be effective participants in this battle against terrorism.

Mr. BUYER. I ask that question because I get opinions from all types of experts. You've got someone who says, well, it is the fourth mission of the VA. Therefore, you are to be the lead. You are to take this on and you coordinate these activities.

Well, wait a minute. If Secretary Thompson creates this new position, Dr. Henderson, as Director of the Office of Public Health Preparedness, is it then his responsibility to coordinate national responses to public health emergencies.

We always have to task somebody to be responsible and then to make sure that agencies, departments then coordinate, integrate and make things happen.

If I do that, if we say, okay, we will make them the focal point to make sure that this education system works, it gets out, information is there, DOD, VA, we give you the authorizing language, you communicate, you coordinate.

Is that going to be sufficient? You two can work through that office.

Dr. MURPHY. I speak for VA. Dr. Henderson is a very, very well recognized individual in this field.

He has the kind of expertise and leadership that will move the federal program for medical preparedness against bioterrorism forward.

We could work very effectively with. We expect to work closely with Dr. Henderson in HHS as we do with our partners in DOD.

So I have no problem with that.

Mr. BUYER. Dr. Hemming.

Dr. HEMMING. I think leadership is the first issue and I think there are many people who could serve in that capacity, and certainly D.A. Henderson could do that.

But I think the next step, which is very important, is for there to be established a dialogue with the people who actually establish the curricula which are taught in these training programs.

We are confronted in medicine with an enormous dilemma. That dilemma is that our cup has not gotten any bigger; that is, we have 4 years or 3 years or 2 years to train health care providers. The amount of information to stuff into those years has grown exponentially.

There are so many voices. There is so much noise out there and the practitioner has only got so much time in his or her life to read and to learn and then there are a lot of other tasks to do.

So we get back to the issue of focus, and I think that is why dialogue by the proper leadership with the people who establish curricula is essential. Together, they could then find a way to articulate these ideas into the things that are taught, the skills that physicians should have, that nurses should have, that EMTs should have, that PAs should have, and I think there is a way to do this, but there is not going to be a quick fix.

It is going to have to be done over time and I think all of the agencies that accredit these training programs and people and permit them to provide health care must be partners in the dialogue, to establish the right kind of curriculum for each of the health care providers, so that it is taught in a timely and adequate fashion, and it ensures that the caregivers are ready.

It is a challenging task simply because of all the other requirements, that we also have to worry about. But, there will be another crisis tomorrow. There is going to be another agent. There is going to be another bacteria, another virus. There is going to be another threat.

So we have to do this right, so that we don't do it for one month and then forget about it.

Mr. BUYER. That's why, at our meeting last night, we went into the night. And I don't want it to be just bioterrorism.

I think what the Senate is doing is very narrow.

Dr. HEMMING. It should be much broader.

Mr. BUYER. Because it is chemical, it is radiological, and if we are going to do something, let's be comprehensive and let's do it right.

I have been one of the biggest defenders of your medical university in this Congress and I will continue to make sure that you focus on your core mission, and that is your military medical preparedness, but you have got the expertise and that is what we want to be able to tap into and authorize you to coordinate with the VA and others, and that is our intent.

Dr. HEMMING. And we would be proud to do that.

Mr. BUYER. Thank you. Let me now yield to the chairman of the full committee, Mr. Smith.

Mr. SMITH. Thank you very much, Mr. Chairman. I want to thank our distinguished panel for their insights. I have read all of your testimonies now, and it does provide us with, again, an additional road map as to what we should be doing.

I do have a question, Dr. Murphy. Are there any additional authorities that you need, anything legislatively that this committee needs to pass to obviously help you do your work, and your colleagues?

You did mention in your testimony a bioterrorism initiative. You might want to elaborate a little bit on that. Perhaps you did that orally and I missed it, because I missed some of the testimony.

I note that in crafting our legislation, that obviously goes to a different committee, the National Preparedness Centers, Medical Preparedness Centers, H.R. 3253, would be considered by our own committee, but another bill that I mentioned earlier about the protocols, I was amazed at the conflicting advice.

I am not being critical, because I think the docs in my area they are doing the best that they could given the information that they had.

Having sat in a few board conferences like that when my own parents were sick and there were disagreements with the infectious disease doctor and the others, the renal man and the others.

So I know that the best minds don't always come to an easy consensus.

But it seems to me that when we have dozens of potential toxins, viruses, Ebola and a whole host of others that could be delivered with incredibly devastating effectiveness against unsuspecting populations, every one of these, it seems to me, we need to sweat the details and come up with—and you have already begun to do that, I know, with this and other work that you are doing.

My point is time is not our friend. We need a crash course in getting this as quickly accomplished.

Would the four medical centers, the Centers of Excellence, would it be good if they were part of the VA or is there some other area where they need to be housed?

As has been pointed out repeatedly, about half of all the students who are medical practitioners do go, in whole or in part, through the VA.

So it seems to me that, from a teaching point of view, we certainly have much to offer.

Doctor?

Dr. MURPHY. We haven't had a chance to review your bill yet in detail. So the administration hadn't developed a position on the bill.

However your proposal for Centers of Excellence is similar to our Geriatric Research Education and Clinical Centers (GRECCs), and our mental health centers (MIRRECs), and others in VA.

We think that those centers were seminal activities to bring the research and clinical expertise and translate that immediately into education programs for our students, residents, and practitioners in areas like geriatrics.

In summary I think your concept is sound and should receive consideration.

Mr. SMITH. Ken Mizrach. Ken, I, in my opening comments, mentioned how grateful I was personally and our letter carriers were collectively for your early intervention, and I know how hard you worked the phones.

I don't know if I told you this, or anyone, and I won't name the name, because it would be embarrassing, but when I first apprised some of our health care leaders in New Jersey that the VA had the capability and could have access to Cipro and are part of a bioterrorism management plan, they never even thought of that.

The way it was put to me, that is a blind spot, I didn't even know that they had that capability, which suggested the left hand didn't know what the right hand was doing.

Again, a crisis sharpens the mind and hopefully there will be many lessons learned from this.

Did you want to maybe comment on some of the work that you did?

Mr. MIZRACH. I just appreciate your involvement with us. I am very proud of the Department of Veterans Affairs and the ability of our staff to rally under any circumstances to provide the support to our communities.

I think that you are absolutely right, the VA is an unknown entity many times and you would be very proud to see how our clinical and administrative staff reacted when we had the World Trade Center attack and we rallied and did whatever it took to support our communities, whether they were Veterans or non-Veterans.

We stand ready to support our communities.

Mr. SMITH. Thank you. You all probably heard today that Kaiser Permanente is being sued by a relative of the inhalation anthrax victim who died, and yet we have been told, in this committee at least, with a staffing note, that Kaiser did have some guidelines that were not—they were probably state-of-the-art with regard to how to treat it and recognize it.

Now that we are moving into the liability issue, as well, obviously, public health comes first, but there will be, I think, another shoe to drop, especially if there is another episode of this, when someone misses it.

Could you perhaps—Dr. Murphy, you might want to, again, take a shot at this.

The protocols, are they there? The CDC seems to be the overarching entity that suggests that we do this or we do that, but it doesn't seem to be off the shelf, or is the guideline that flexible that they constantly have to update it?

Again, the chaos of the first week of what happened in my own district was very illustrative. It was like everyone was making statements.

Matter of fact, I kept my mouth shut, other than to say that we trust and have great confidence in our medical people, because this is basically a medical issue.

Dr. MURPHY. As has been pointed out by some of the other witnesses today, many of our health care providers in this country, prior to the recent anthrax attacks, did not think about biological, chemical, or radiologic injuries or attacks on a routine basis.

It wasn't a subject that they were familiar with. In fact, most of my experience in that area came from my training, a Master's in Public Health at the Uniformed Services University, and through my military experience, and then in investigating some of the veterans' illnesses after the Gulf War.

However, the training programs are available. For years, VA has been broadcasting the 12-hour program on bioterrorism that USAMRID produces, and all of those people are faculty at USUHS.

The problem, as I see it, is that physicians and other health care providers in this country don't know how to access that information. We all have busy lives. They haven't worked it into their CME, the continuing medical education, schedule or into their medical reading time.

We need to make the tools readily available through multiple different mechanisms and we need to put them in formats that people are comfortable with, whether it is reading material, because they are visual learners, or whether it is a satellite broadcast or an internet interactive web site or a CD-ROM.

We need to make them readily accessible, easy for people to understand, and provide them either at a reasonable charge or free of charge, if they are government products.

Mr. SMITH. Dr. Murphy, how would you respond to Dr. Hill, the Chair-elect at the AMA Board of Trustees, on page 13 of his testimony, bottom lines in terms of his recommendation?

One is to re-create the medical education for the National Defense Program, expanding it to graduate medical education programs, and then he gives a number of specific recommendations there, like specific curricula objectives, Federal funding, local identified faculty.

And the second proposal is to include education and training as part of the regional response preparation of the National Disaster Medical System.

Dr. MURPHY. I think those could all be very effective mechanisms in getting education into the hands of health care providers.

Mr. SMITH. Is any of this being done now and to what extent, or are these relatively new recommendations?

Dr. HEMMING. I consider infectious disease as my other business when I get to practice.

Let me tell you that by today, American physicians, probably most of them, have gone back to their textbooks, and they have now read about anthrax.

I am certain that there is currently more knowledge about anthrax in the medical community in the United States than ever before in the history of this country, because physicians really are professionals and most of what they do is self-taught.

We spend a lot of time studying and reading. As a consequence, now that people are focused on this issue, I would wager you that even in Yukon, ID, (I bet you don't even know where that is. It is close to where I was raised) physicians there probably could diagnose inhalational anthrax today, only because they have also have so many ranchers out there.

But the issue is physicians, if you get their attention, then they self-read, they learn, and they get ready because they are really interested in providing the best care they can for their patients.

The issue, again, is focus and all of the requirements and being able to reach up and pick out the important ones.

I think what this WMD education can do is to allow American physicians and primary care practitioners, to begin thinking, to realize that we are not living on a safe little island any longer. All

of us are now at risk of having something very unexpected happen. Then, it is easy to play a game of probabilities and talk about the infectious disease threats that we have and to teach people about them.

We can talk about chemical threats and what to do if something happens.

I believe that our American physicians will be enormously responsive, so long as we allow them to take the time out of their busy lives and focus on these issues and to get prepared.

Mr. SMITH. Let me just ask one question about detection. Obviously, we are all trying to get up to speed as to what is currently available off the shelf and what is at least being considered to be even more effective.

But I have read a number of the brochures and obviously some of them are the glossy type, but others went into greater depth as to what these air breathing, both chemical and biological detection devices can accomplish.

I guess, Dr. Murphy, you might be the one to answer this.

Does the VA have any plans to procure—maybe you already have some in the field—so that you know what you are dealing with? Particularly if it is chemical.

One of the devices that are used by the military, obviously, breathes in, finds out what is in the air and does it in such an effective way, that, obviously, precautions can be taken.

And it seems to me that if you have got first responders and emergency room personnel dealing with something, they need to know, A, what it is for the sake of the victim, and, also, A, to protect themselves.

Dr. MURPHY. This isn't an area where I have a lot of technical expertise, but as I understand the current state of art with the detectors, it is not only that you have to purchase the equipment, but you have to have a team that is able to interpret and confirm the results of that detection.

It is not a completely transparent process. At this point, we are looking at whether there is a need for detectors in any VA facilities, but we have not moved ahead or a decision to begin purchasing any at this point.

I don't know if, Dr. Hemming, you have anything.

Dr. HEMMING. This is a far more complex issue than the marketers would have you believe, the people who are making devices, but there are ways of detecting most of these materials.

Again, I think what one needs to do is look at cost versus benefit and not spend a lot of money on things that are really not going to help.

There are many people who are expert in this area who can give us good advice and good counsel. The military is worried about this a lot. My guess is that John Parker at USAMRID could answer a lot of these questions very well for you in terms of what really does work and what doesn't work and where we should invest our dollars in terms of protecting our population.

Mr. SMITH. I appreciate that. I just would note for the record, at our last hearing about a month ago, I had asked a question about detectors and one of our witnesses said he was very concerned about a false alarm, and I have been asking everybody that I can

possibly ask what kind of potential is it that we would get a false alarm, and I get looks like the technology has progressed to the point where that is highly unlikely.

I recounted the story, and it is just one anecdote among hundreds of thousands probably about the World Trade Center, but my chief of staff's brother works at Merrill Lynch, saw the building come down, handled it quite well, until someone said there had been a chemical exposure.

He said the fear and the terror just gripped him and it was like, oh, my God!, what does that mean. And then it was found to be a false alarm about the rumor.

But as far as anyone knows, and I am waiting to find out, there was no machine, detector of any kind that was in proximity to this, the emergency responders and the first responders didn't have it, to find out what indeed might have been in the air had there been some kind of chemical or biological release.

It seems to me that whole groups of people could unwittingly walk into a situation that would be disastrous for their health.

That is why I am wondering about deployments, strategically, you don't need one maybe in every outpatient clinic, but there maybe needs to be some thought given to where we do go from there.

I learned another time, when we were—there was talk in New Jersey 10 years ago of putting in, in the Greenfield area, a toxic waste burner, to be obviously differentiated from a waste to steam deal, which are state-of-the-art and relatively clean.

This would be burning and nobody knows what would be coming out of that smoke stack and you would have to transport all kinds of toxic materials from all over New Jersey to this place.

The question arose, and at first it was laughed at by some, what about the first responders. Then we just called them firemen and firefighters.

And it was like, well, are their rubber boots going to melt when they walk into something. No one knew.

And at the public hearing that I testified at, it was amazing, the commissioners, the technical staff, were scratching their heads, what happens.

Detection, again, being a key issue. What is it that you are dealing with?

So just food for thought, and I think we need to work that one. I'm sure you are.

Dr. MURPHY. My understanding is that the technology has not developed to the point that we would not expect large numbers of false alarms.

In fact, I would predict that most of the alarms that you would get off of the devices would be ultimately determined to be false positives.

As we know from our experience in Desert Shield/Desert Storm, those alarms themselves can create anxiety.

Therefore, I think you need to weight the risk and the benefit of the technology that would be put in place against the level of risk in various locations. Detectors could then be placed in high risk areas.

I read in *The Washington Post* that the Metro, for instance, is looking at detectors for the subway system.

We need to carefully evaluate what the technology can do for us and decide whether there is a significant benefit for our patients and our facilities.

Mr. SMITH. Thank you. Yes, Doctor.

Dr. HEMMING. Fear is really a powerful emotion. Let me talk as a pediatrician, who again and again has been in a community where there is a case of meningococcal meningitis. Suddenly you have a child in an elementary school who develops meningococcemia or meningitis; and, now all of the people, the parents of the children in that school and the teachers are all concerned that they, too, will develop meningitis.

It is really an amazing experience when suddenly you, as a health care practitioner, have several thousand people fearful for their family and their children descend on you, asking you to assure them that they won't or can't develop a secondary case of that illness.

This is the same psychology that terrorists are using in this whole business, and I think as processionals, the only tool that we have better than all of the science is information and communication.

One of the things we haven't talked about here is how important it is that systems be in place to inform communities, to teach people so that they respond, not out of shear terror, but thoughtfully, when their families or lives are threatened.

I think there are ways to do that and I think our mental health professionals can help us with this. I think this is another educational area where the VA and others can make a huge difference in terms of community response to fear, the very fear that terrorists want to evoke.

Mr. BUYER. Thank you, Mr. Chairman. Ms. Carson.

Ms. CARSON. Thank you very much, Mr. Chairman.

I would like to ask Dr. Murphy. The chairman's bill, H.R. 3254, lists understanding of the potential long-term effects of terrorist attacks as part of the program content for anti-terrorism training, and education.

One of the long-term effects of any horrific incident, of course, is post-traumatic stress.

Should mental health services, such as PTSD counseling, be included in anti-terrorism curriculum, in your opinion?

Dr. MURPHY. Yes, absolutely. We believe that good mental health training should be part of medical school curriculums and it is important for health care practitioners, whether they intend to go into a mental health profession or not, to have a good basis in mental health training, including in PTSD and other long-term psychological effects of terrorist attacks.

Ms. CARSON. How many decontamination stations are currently in the VA health care system and how many are planned?

Dr. MURPHY. We currently have 30 decontamination units.

Ms. CARSON. Three-zero, 30?

Dr. MURPHY. Thirty, three-zero, in our medical facilities around the country and we have asked each facility to look at having at least a portable decontamination unit available.

Ms. CARSON. Let me close by saying I applaud the VA and its existing collaboration with DOD and other agencies on developing and delivering quality education and training programs, such as the Emergency Management Academy and the Emergency Management Strategic Health Care Group Technical Advisory Committee.

Now, in your opinion, Dr. Murphy, what coordination efforts are further needed between the VA and other Federal agencies in presenting a common front to the threat of biological, chemical, and/or radiological terrorism?

Dr. MURPHY. I think that there are a number of areas where we have gaps in our coordination between departments.

We need to have joint scenario planning, so that we can make sure that we have developed action plans for all the likely scenarios that may occur for potential terrorist attacks in the future.

We need to have policies that are consistent between the agencies. We need to have our personnel working together on a routine basis so that we are comfortable with each other's procedures and policies, so that we can ensure an effective working relationship during an emergency.

I think that we need to have joint training programs, not only the kind of education programs that we are talking about here today, but also disaster drills and other training exercises that allow us to actually test our policies and procedures on an ongoing basis.

In addition, we probably need to have more joint preparedness planning.

So I think there are multiple levels of coordination that need to go on between government agencies and departments over the very near future.

Ms. CARSON. Thank you very much. I yield back my time.

Mr. BUYER. I am not interested in defining nationwide medical preparedness as having USUHS piggyback a few training courses. That is not what this is about. I just want to be very clear.

So what communications or coordination have either of you had, Dr. Hemming, Dr. Murphy, representing VA and DOD, with anyone from the AMA or the American Association of Medical Colleges as a dialogue or a beginning?

Have you had any?

Dr. HEMMING. We received an invitation from Senator Frist and from Dr. Cohen to participate in a conference on the 28th, that the AAMC is sponsoring, and we will have some of our folks present at that meeting.

We have, as you may know, responded to a number of queries from other organizations that have asked us about what we do, how we do it, and we stand ready, as a consultant, as it were, to provide whatever information people request from us.

I think that we have also been in dialogue with the American Medical Association.

As you know, from the materials we submitted to you, there were two conferences held by the AMA Board of Delegates on these threats and conjointly with the VA, the DOD, and the CDC. We made presentations to the AMA, talking to primary care physicians about beginning planning to respond to WMD concerns.

We have a member on my staff who is a member of the ACGME and this will be an agenda item.

The ACGME, the Accreditation Council on Graduate Medical Education, will be discussing these issues at its meeting in December in San Francisco.

So, yes, indeed, we are already reaching out to a number of the organizations that we belong to to establish a dialogue, because in the end, if this is going to work, it has still got to come from the grass roots up. What has to come from the top down, I believe, is to enable and to encourage and maybe, when necessary, provide some funding, so that organizations can afford to do this.

I believe that dialogue has already begun at all levels of medical education in the United States and I think what your committee can do is to encourage that dialogue and help it succeed.

Mr. BUYER. Thank you. Dr. Murphy.

Dr. MURPHY. I would like to agree with that Dr. Hemming said and add that I would advise that you should not simply ask VA to develop stovepipe programs or a "stand-alone" education program, nor should you ask the university to do that, because both of us would be unsuccessful in the effort if we did not have, as active partners, all of the other accrediting organizations and organizations that are involved in medical student education, graduate medical education, and the AMA and other county and state medical societies.

This needs to be a broad-based effort not only among physicians, but among other health professional groups in order for the Nation to be prepared to respond in the future to chemical, biological, or nuclear attacks.

As a Nation we need to be able to, understand the threat, be able to diagnose and treat it, and to effectively deal with the long-term health consequences, and that is where any effort by this Congress should be focused.

Mr. BUYER. Thank you very much for your testimony. You are now excused.

Ms. CARSON. I wonder, Mr. Chairman, as your next panel prepares, if you would allow me to submit questions for the record to the panel.

Mr. BUYER. No objection.

Panel four, I now recognize Dr. Edward Hill, who is the Chairman-Elect of the American Medical Association's Board of Trustees. Also testifying will be Dr. Jordan Cohen, President of the American Association of Medical Colleges, and we will also receive testimony from Dr. Martin Blaser, Professor and Chairman of the Department of Medicine, at New York University School of Medicine.

Dr. Hill, you are now recognized to present your testimony.

STATEMENTS OF J. EDWARD HILL, M.D., CHAIRMAN-ELECT OF THE BOARD OF TRUSTEES, AMERICAN MEDICAL ASSOCIATION; JORDAN J. COHEN, M.D., PRESIDENT, AMERICAN ASSOCIATION OF MEDICAL COLLEGES; AND MARTIN J. BLASER, M.D., PROFESSOR AND CHAIRMAN, DEPARTMENT OF MEDICINE, NYU SCHOOL OF MEDICINE

STATEMENT OF J. EDWARD HILL

Dr. HILL. Thank you, Mr. Chairman, and good afternoon. I am Edward Hill and I am Chair-Elect of the Board of Trustees of the American Medical Association.

Perhaps more importantly, I am a practicing family physician in Tupelo, Mississippi, and until very recently, was the director of a residency training program for family doctors in Tupelo.

Before I begin, allow me to make an historical observation. This country, like many other countries, has already faced events involving mass destruction. We have had earthquakes and hurricanes and tornadoes and hazardous material spills.

So medical professionals have had to deal with and treat mass casualties. So as we discuss how to prepare for treating the casualties of weapons of mass destruction, we should recognize the broader implications of what we do.

Our message today is twofold. First, we would like to acknowledge the accomplishments of the Department of Veterans Affairs and Department of Defense in educating medical students and physicians.

Second, we would like to identify some ways we believe that both departments could further help in the education of the students and physicians.

The AMA has fully recognized the fact that both the departments have made important contributions in education. In fact, we estimate that at least 65 percent of the Nation's physicians have received part of their training in a VA medical facility.

Similarly, the Department of Defense, through its health professional scholarship program, has enabled thousands of medical students to obtain their medical degrees at civilian medical schools.

In those programs, the students have received somewhere between 50 and a 132 hours of training in public health and disaster medicine, such as diagnosing and treating patients injured by chemical, biological, or radiological weapons.

The departments have also played a crucial role in residency programs across the country. Military residency programs have provided specialty specific training that focuses on treating injuries, as you have already heard this morning, from weapons of mass destruction.

And the Veterans Administration, through its residency programs, has functioned as an integral part of the Nation's response medical system.

Presently, the departments are training close to 2,300 resident physicians, along with thousands of other full and part-time physicians.

Along with the medical education and training, both departments' health centers perform a critical role in collaborating with civilian medical facilities.

For instance, the School of Medicine of the Uniformed Services University of the Health Sciences has developed a curriculum for addressing the medical aspects of chemical, biological, and radiological terrorism, and this Uniformed Services Medical School has also successfully modified its curriculum for effective distance learning, that you have already heard about this morning.

Both departments also have strong research components that are closely integrated with their clinical and educational activities. It is clear that the knowledge and experience within the clinical and medical divisions of these departments are a tremendous national asset.

The second part of a twofold message, we would like to identify a couple of ways that we believe the departments could improve this country's readiness to treat those injured by weapons of mass destruction.

First, the departments could develop a voluntary educational program for medical schools, osteopathic medical colleges and residency programs, with specific curricula objectives.

To help implement this educational program, we would suggest that a national coordinating office be established, and the Uniformed Services University of the Health Sciences could very quickly fill this role.

In developing this educational program, the Department of Defense and Department of Veterans Affairs would need to rely upon subject matter experts. Current department staff and faculty could function as an outstanding resource.

To ensure that expertise on these issues is available locally, these departments should also identify local faculty trained in diagnosing and treating people injured by weapons of mass destruction.

As a last element for establishing an educational program, the funding would need to be adequate, guaranteed and Federal.

In the past, there is a similar Federal program that existed. From 1952 through 1958, the Department of Defense sponsored a voluntary program in U.S. medical schools entitled Medical Education for National Defense, or MEND. The AMA and the AAMC both strongly supported this program, which incorporated all of the elements we are talking about.

In 1968, the program lost its funding. I mention this program to highlight that there has been an effective voluntary educational program and, by the way, at that time, a 100 percent of the medical schools participated. There were 92 medical schools and they all participated.

So we believe this program should be re-instituted.

In addition to establishing an educational program, our National Defense Medical System could be strengthened.

Many practicing physicians are currently part of this National Defense Medical System. They are affiliated, for instance, with a hospital that is connected to a VA or a Department of Defense medical facility.

The department's facility functions as the organizing entity in their region. These are natural alliances for collective education and should be fostered.

One way to foster them may be in hospital accreditation systems, as has also been suggested already today.

These are just a few of the ideas that we have for improving the education of medical students and physicians and, of course, we would be happy to discuss them further at your convenience.

Thank you, Mr. Chairman.

[The prepared statement of Dr. Hill appears on p. 89.]

Mr. BUYER. Thank you, Dr. Hill. Dr. Cohen.

STATEMENT OF JORDAN J. COHEN

Dr. COHEN. Thank you, Mr. Chairman. I am Jordan Cohen, President of the Association of American Medical Colleges, the AAMC.

AAMC represents the country's 125 medical schools and over 400 major teaching hospitals and health systems, including 74 VA medical centers, 98 academic and scientific societies, representing over 87,000 faculty members and, also, our Nation's medical students and residents.

Education of our Nation's medical students and health professionals is one of our core missions, and I am pleased to tell you about what we are doing at the association to address the critical topic of treating victims of weapons of mass destruction.

It does need to be said that everything changed on September 11, the tragic events of those days and the uncertainty that has followed has resulted in new priorities and new responsibilities for everyone, very much including the AAMC.

In representing our Nation's medical educators, our key priority is to prepare tomorrow's doctors with the knowledge and skills they will need to carry out our current fight and to tackle any future conflicts as they may occur.

Now, to address this urgent national need, the AAMC has developed what we are calling the first contact/first response plan, which is to ensure that the Nation's physicians are ready to respond to incidents of biological, chemical, and radiation terrorism.

As part of this plan, as you have already heard, we are convening a coalition of health education organizations, very much including the VA and USUHS, as you heard, on November 28, here in Washington, to help us identify and develop educational information resources to aid physicians and residents who are likely to be the first contact, the first to encounter victims of terrorist attacks.

We believe that tomorrow's physicians must begin in medical school to equip themselves with the knowledge and skills required to deal with future terrorist attacks.

Medical schools, I can assure you, across the country, are already working very hard towards this goal through their continuing medical education departments, as well as their undergraduate and graduate medical education efforts.

These efforts comprise a host of activities ranging from hands-on training sessions, one-day seminars to full-fledged new courses within their academic programs.

I have given you many examples in my written testimony, and I won't take the time now to repeat them.

AAMC has a primary responsibility for improving the education of physicians when they are in medical school and to ensure that a more systematic and to ensure that a more systematic and comprehensive set of activities is available to all medical students, we

are convening a panel of experts in the defense against bioterrorism to develop explicit learning objectives for medical students and to recommend educational strategies that medical schools might adopt to ensure that students have opportunities to achieve the stated objectives.

This approach, by the way, we have found to be extraordinarily powerful in other areas of curricular needs, such as population, health, information, technology and the like. So this is a model that is already well established and has been well accepted by the medical education community.

We are working in partnership with the American Medical Association and medical specialty societies to arm physicians who are in training right now as residents and fellows in our country's teaching hospitals with the information and tools they need to practice their chosen specialties.

That training will now include how to respond immediately and effectively to possible terrorist attacks.

It is essential that medical residents and other health professionals receive appropriate education and training, because they are very likely to be among the individuals to be in first contact positions for afflicted patients.

AAMC also has a responsibility, in collaboration with other health education medicine, public health and science organizations to act as a catalyst and a contributor to the ongoing national dialogue on how to provide all provide all practicing health care professionals with everything they need for the American public in a time of crisis.

The continuing medical education departments in our hospitals and medical schools serve a vital function in this regard.

The health care workforce is well prepared, as Dr. Hill has already mentioned, to respond to situations of mass casualties in which primary injuries are traumatic in nature, given our longstanding experience with natural disasters, such as earthquakes, hurricanes, and floods.

There is a good deal more that we need to do, however, to be equally well prepared to deal with the potential of chemical, biological, and radiological terrorist attacks.

Finally, let me mention the AAMC recognizes the unique opportunities for partnerships that exist between academic medicine and public health system.

Fortunately, we already have in existence a cooperative agreement with the Centers for Disease Control and Prevention and plan to work closely with the CDC's expert staff to identify ways to better prepare the physician workforce to deal with terrorism.

Our members also work very closely with the Agency for Health Care Research and Quality. Again, examples are the Johns Hopkins researchers and those are the University of Maryland and Emory that I detail in my written statement.

These efforts to be successful, however, are going to need to have continued cooperation and support from the VA, which has been a mainstay for our multiple missions over many decades.

Academic medicine and the VA share three missions of health care delivery, education, and research, and the affiliation agree-

ments between the VA and medical schools are critical to achieving all three missions for both partners.

Currently, 139 VA medical centers have formal affiliation agreements with a 107 of our medical schools.

Each year, as you have heard, more than 30,000 residents and 22,000 medical students rotate through the VA hospitals and clinics to receive a portion of their medical training.

VA supports yet an additional mission, that of providing backup to the military medical system in times of war and national emergency, as you know.

For this reason, the AAMC views the VA as an absolutely essential partner in our first contact/first response efforts.

We have had over a 50 year history of affiliations with VA medical centers and abundant evidence, I think, has accumulated, to the advantages of that partnership on all three of our missions.

The VA's ability to recruit and retain high quality physicians and the access of Veterans to the most advanced medical technology and cutting-edge research are just two of the multiple benefits that derive from this relationship.

Because a significant amount of medical education is provided through VA settings and by jointly appointed VA faculty, VA is an essential partner in the AAMC's efforts.

I would like to mention, I didn't mention this in my written statement, Mr. Chairman, but I would like to draw your attention to an asset that the AAMC has that may be of interest to you.

We have what is called a curriculum management information tool, CRMIT, as we call it, which is a web-based tool that all medical schools utilize to categorize and detail their curriculum.

So we have access to what goes on in all our medical schools with respect to curricular content, where in the curriculum, who is doing the teaching.

So I think we are going to be in a position, we are in a position to track over time the degree to which these topics of now vital interest are going to be included and increasingly evident in our curriculum.

So I think we're going to be, as I say, in a position to help our schools track their own progress and to benchmark their activities against those schools that are becoming the leaders in this field, and I think that is going to be a useful issue.

I would also like to make a comment to follow up on one of the comments of the earlier witnesses, Adm. Eisold. He mentioned that what we are really dealing with here is really quite standard in the way of medical treatment.

What we are talking about is early recognition of some uncommon diseases, diseases that we haven't really had a reason to be concerned about before.

But although the task is—I certainly don't want to minimize the magnitude of the task that is before us, but I also don't want you to get the impression that we are faced with a huge, unmanageable sort of challenge here.

I think we need to categorize those likely pathogens and chemical and radiation exposures and include them in our curriculum in ways that fit with our already current well recognized modes of diagnosis and treatment.

So we are dealing with something that is incremental, not totally new and not totally novel with respect to what is going on already.

Finally, I just would like to endorse your concept about D.A. Henderson and his new agency in HHS. I think that would be a very, very good focal point and, as you put it very well, I think the staff of the umbrella that I think all of our activities could very conveniently be orchestrated under.

Thank you.

[The prepared statement of Dr. Cohen appears on p. 104.]

Mr. BUYER. Thank you. Dr. Blaser.

STATEMENT OF MARTIN J. BLASER

Dr. BLASER. Mr. Chairman and members of the subcommittee, thank you for the opportunity to appear before you this afternoon.

I ask that the committee include my complete written statement as part of the hearing record.

I am Martin Blaser, Professor and Chairman of the Department of Medicine at the NYU School of Medicine, and I am also one of the nine members of the sub-specialty board in infectious diseases of the American Board of Internal Medicine.

I might note that for a number of years, we have had questions on our board examination dealing with topics of bioterrorism, which may help explain why infectious disease physicians are so good at recognizing these recent cases.

Before coming to NYU, I also served as an EIS officer at the CDC and I have served as the Chief of Infectious Diseases at Vanderbilt, where I worked closely with Dr. Bill Frist, who was director of our transplantation system.

I am also a staff physician at the New York Harbor VA Medical Center and I have been a VA physician for more than 20 years.

My research laboratory is at the VA and I have always been proud of my VA affiliation, especially now.

Incidentally, I have conducted research on anthrax since 1996. I was involved in the care of the infant with anthrax in New York City, and serve on Mayor Giuliani's Task Force on Bioterrorism.

As you know, the VA medical system is a tremendous national resource. As our government examines ways to improve responses to public health emergencies in a post-September 11 world, collaboration between the VA health system and our Nation's medical schools offers a way to address many of the gaps in our current ability to prepare for bioterrorism.

As an example, I would like to discuss the collaboration already underway between the NYU School of Medicine and the New York Harbor VA Medical Center to create the VA-NYU joint Center for Bioterrorism Research.

It is my hope that this can be a model for future collaborations between VA facilities and medical schools across the country.

The NYU School of Medicine and its three major affiliates, Tisch University Hospital, Bellevue Hospital, and the New York Harbor VA are located on a single campus. We are the closest academic medical center to both Wall Street and the mid-town business district. Bellevue is the major disaster hospital in New York.

Our combined campus is the medical front line in New York. Both before and since September 11, the School of Medicine and its

affiliates have been closely involved with the city, state, and Federal Governments in preparing for and responding to acts of war and bioterrorism.

On September 11, we fully mobilized all of our hospitals and we could have cared for thousands of victims, had they come.

Another example of our efforts is the NIH supported General Clinical Research Center, located at Bellevue.

In the event of a chemical or biological attack in New York, the GCRC facilitate performing physiologic measurements on patients, banking of specimens, and enrolling seriously ill persons, for example, with inhalational anthrax, smallpox, or plague, in clinical trials to determine optimal therapies.

It would also enable our scientists to translate new knowledge developed at the research center to the bedside.

Another example is at our medical grand rounds last week, the topic was anthrax. We had a panel of experts and had 400 doctors and students at our three major hospitals.

Incidentally, I would like to hand out the VA's pocket cards in bioterrorism to all our faculty and house staff at next week's medical grand rounds throughout the NYU system.

The School of Medicine has already committed itself to the preparedness effort by creating the Center for Health Information and Preparedness, or CHIP.

Initial efforts of CHIP are in two areas, creation of a web site to provide accurate, up-to-date and independent information and assessments in terms understandable to both professionals and lay audiences, and, also, a wide spectrum of bio defense related research in all component schools of New York University.

Our VA-NYU proposal contains a program of basic and translational research on the prevention, diagnosis, and treatment of diseases related to bio warfare.

Essential to that infrastructure of modern research facilities, in which bench research, animal studies, and human clinical investigation can perform safely.

Core research programs will focus on infectious and pulmonary diseases, such as anthrax, clinical pharmacology and toxicology.

We intend to focus on both biological and chemical agents, such as nerve gas and organophosphates.

I would be happy to discuss these areas in further detail during the questioning, if member are interested.

These areas hold the promise of quickly translating the results of research to novel diagnostics, treatments, and preventives for victims of biological and chemical attacks.

In addition to research, the training of our health professionals is key to improving the preparedness of our national health system.

VA facilities around the country have much to contribute to this area, as well, and as part of the NYU CHIP program, we would develop web-based modules for the education of physicians, first responders, emergency room personnel, and other health professionals about diagnosis and treatment of bioterrorism victims.

Thank you, again, Mr. Chairman for your invitation to appear before the subcommittee today. Our world was changed on September 11, but I am confident that with adequate support, our Nation's

academic medical centers, working closely with the VA system, will be successful in preparing for the challenges ahead.

Thank you.

[The prepared statement of Dr. Blaser, with attachment, appears on p. 109.]

Mr. BUYER. Dr. Hill, you testified that from 1954 through 1968, the Department of Defense sponsored a voluntary program for U.S. medical schools entitled the Medical Education for National Defense.

Following a negative report by the General Accounting Office and citing lack of performance criteria and potentially budgetary problems, the program was no longer funded in 1969.

Now that I've resurrected what we had done then it would be helpful here to us, what performance criteria does the AMA feel is necessary to establish so that this will not happen again?

I don't want to fail.

Dr. HILL. I anticipated that question, and I don't know the answer, because I don't know what the criteria that they weren't—we tried to find that and actually couldn't find it.

It was 1968, actually. But I do know the AAMC and AMA both, the next year, in 1969, strongly recommended that it be re-instituted and it was not, and I do not know the reasons that it was not re-instituted.

Mr. BUYER. Dr. Cohen, your testimony stated the health care workforce is well prepared to respond to situations of mass casualties. Yet, Dr. Omenaca testified that this is not the case at all.

He said that the system was in chaos and he encountered tremendous communication problems.

Would you like to respond to a practitioner's testimony?

Dr. COHEN. I think what I was trying to indicate was that in the case of traumatic casualties, we have had a lot of experience dealing with people who have been injured either in hurricanes, floods, disasters of one kind or another, large vehicular accidents, train wrecks and the like.

That is the kind of thing that I do think the system is reasonably well prepared to deal with, because we have had a lot of experience. We have trauma teams, we have trauma centers, we have emergency medical teams that are able to do on the site emergency care and the like.

That is the kind of thing that I think we are reasonably well prepared to do.

The kind of thing that Dr. Omenaca was referring to, I would agree we are not well prepared to deal with bioterrorism, with biologic agents, with chemical agents, with radiation exposure. Those are the kinds of things we have not had experience and that is precisely why we need this major educational effort now to bring everybody up to speed with the sort of issues we are going to be dealing with.

In that context, something that hasn't been mentioned, and maybe it is not relevant to your concerns here, but I think we all now recognize that our public health infrastructure is really in need of substantial investments to improve the ability of the public health workforce and their critical role in managing these large

scale and sometimes not so large scale problems, is one of the real weak links presently in the system.

But as I say, that may be not the topic of this particular hearing, but I do think it is important that we all recognize that that is an urgent need for our country.

Mr. BUYER. One last question before I yield to Ms. Carson. The Dean of USUHS recommended credentialing.

What is your opinion on us getting involved in that? My gut is telling me stay away from that, leave that to the professionals.

Dr. COHEN. That would be my gut, as well, Mr. Chairman.

Dr. HILL. Requiring or mandating from a legislative standpoint would probably not be a good idea.

I think it has already been shown that our medical universities will respond very quickly when there is a crisis. They are already responding, as you have heard this morning, without a great deal of organization yet.

We think the organizational structure should possibly come from your bill, but certainly not the credentialing.

Mr. BUYER. We have no intentions of mandating curriculum or getting involved in credentialing.

You would endorse the MEND Act, too, to resurrect it, would you not? Would both of you?

Dr. COHEN. Yes, sir.

Mr. BUYER. All three?

Dr. BLASER. Yes.

Mr. BUYER. In the affirmative. Thank you. Ms. Carson.

Ms. CARSON. I will be very quick. We have got a vote on.

In your opinion, should a specialty of biological terrorism be created and taught at medical schools? Should chemical and radiological terrorism be included?

Sometimes it takes days or weeks for the effects of a bioterrorist event to be noticed.

Is it wise to differentiate bioterrorism from other infectious disease studies, to include reporting and surveillance actions?

I am having post-traumatic stress. Every time I sneeze, I say, oh, my God, I have got the symptoms.

Dr. BLASER. I would like to speak as a member of the Infectious Disease Board of the United States. We have always resisted separating into sub-segments because one cannot predict where the next infectious disease problem will be.

We recommend broad training in the principles and the specifics of infectious disease. That is why we have had bioterrorism and other aspects on our board examinations, and this is the way that we can ensure, as a country, that we will develop a cadre of broadly trained individuals who are ready to recognize the next challenge, the next medical and diagnostic challenge.

Dr. COHEN. Absolutely agree.

Dr. HILL. I would like to briefly comment. We don't have any trouble once it gets to the sub-specialty point.

Our problem is the primary responder. So our educational efforts, I hope, will really concentrate on the primary care community, the family doctors, internists, pediatricians, emergency room people, because once we do the consults, we usually are well on our way to success.

Ms. CARSON. Thank you.

Mr. BUYER. Thank you, Ms. Carson. Gentlemen, I know you have waited a long time to present your testimony, but hopefully as you listened, it was informative and helpful to us, because this is going to be a continuous dialogue as we work together on this.

I would like to thank Dr. Fran Murphy and Dr. Mather for waiting around and listening to your testimony, and I know she eagerly awaits your coordination, communication, integration.

I thank you for your testimony. Very appreciative.

I will ask that my closing statement be placed in the record.

This hearing is now concluded.

[Whereupon, at 1:40 p.m., the subcommittee was adjourned.]

APPENDIX

OPENING STATEMENT OF MR. BUYER, VETERANS AFFAIRS SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS

"TERROR ON THE HOMEFRONT: ARE WE MEDICALLY PREPARED?"

Nov. 14, 2001

Today's hearing will examine a very important question, which affects not only those of us in this room, but all Americans. We must answer the fundamental question, "Is the U.S. medical community prepared for biological, chemical, and radiological acts of terrorism?"

Since September 11th, our country has been in a constant state of fear and anxiety of not only flying the so-called friendly skies, but also opening our mail. We are fighting a two-front war, not only here in America, but also abroad.

It is clear our health care providers are not resourced or trained with the proper tools to detect, diagnose, and treat casualties in the face of biological, chemical and radiological weapons.

The purpose of this hearing is to review the critical roles that the VA and DoD should play in providing our Nation's medical students and current health care professionals with the education and training programs necessary to respond to terrorist activities.

Before I continue with my statement, I would like to extend a warm welcome to our distinguished panelists. Today we are fortunate to have with us Rep. Dave Weldon of Florida and Rep. John Cooksey of Louisiana.

I would also like to extend a special welcome to Admiral John Eisold, our Attending Physician to Congress. Since the Office of the Attending Physician was established in 1928, someone in that position has never testified before a House or Senate Committee. However, given the importance of the subject matter of this hearing, and Admiral Eisold's personal and professional interest, he has agreed to share with us his perspective on this critical subject.

I also would like to recognize two physicians who are on the front lines in this medical war on terrorism. The first, Dr. Susan Matcha, diagnosed and treated two employees of a Washington, DC area postal facility who contracted the anthrax virus. Second is Dr. Carlos Omenaca, who diagnosed and successfully treated one of the first victims of inhalation anthrax in the Miami, Florida area.

A welcome should also be extended to VA Deputy Under Secretary for Health Dr. Fran Murphy and her staff; Dr. Val Hemming, Dean of the F. Edward Hebert School of Medicine at the Uniformed Services University of the Health Sciences; Dr. Edward Hill of the American Medical Association; Dr. Jordan Cohen of the American Association of Medical Colleges; and Dr. Martin Blaser of New York University.

They are all here today because this hearing will provide us, as well as the American public, with information crucial to the new war or terrorism. Your testimony will help this subcommittee better understand the alleged shortcomings of the medical community's educational institutions and how the VA and DoD can assist and coordinate expertise to help the new generation of doctors to detect, diagnose, and treat these new threats to public health.

Experts have been warning us for years that our healthcare system is NOT prepared for a chemical, biological, or radiological event—terrorist or otherwise.

I would like to share with you a foretelling statement made by Dr. Tara O'Toole in 1999. Dr. O'Toole, a senior fellow at the Center for Biodefense Studies at Johns Hopkins University, said, I quote, "Media coverage of modern epidemics will have a profound influence on the outcome of response efforts should a biological attack occur. The number of people who were ill and in need of hospital care would likely be exceeded by individuals seeking care because they were fearful of being sick." I believe that this was the public response to the recent anthrax attacks.

I firmly believe that physicians and the entire health care community must be educated about the potentially devastating consequences of terrorism and the critical role that health care providers must play in addressing such attacks. It is essential that health care providers can recognize the basic clinical manifestations and treat diseases caused by weapons of mass destruction.

Our civilian healthcare system must develop effective, practical responses to these deadly weapons. It must do this through planning, training, and preparation for further terrorist attacks.

This is why I introduced H.R. 3254, the "Medical Education for National Defense in the 21st Century." I want to thank Full Committee Chairman Chris Smith, Vice-Chairman Michael Bilirakis, Cliff Stearns, who is the Vice-Chairman of the Veteran's Health Subcommittee, John McHugh, Chairman of the Armed Services Subcommittee on Military Personnel, and that Subcommittee's Ranking Member Vic Snyder.

This legislation will create a partnership between the VA and the DoD and task these two agencies to develop and disseminate a program to both our current medical professionals and current medical students in the Nation's medical schools. We already have a nexus in place between our medical universities where there is a VA hospital in close proximity, and this is what we plan to tap into.

The combination of the DoD's expertise in the field of treating casualties resulting from an unconventional attack, and the VA's infrastructure of 171 medical centers, 800 clinics, satellite broadcasting capabilities, and a preexisting affiliation with 107 medical schools, will enable the current and future medical professionals in this entire country to become knowledgeable and medically competent in the treatment of casualties of weapons of mass destruction.

We cannot afford to assume that our country will never have to experience a massive biological, chemical, or radiological attack. We must act to ensure that if the worst of our fears are realized, our medical professionals will be ready and able to effectively respond to such fallout.

An American Association of Medical Colleges (AAMC) Reporter article in December 1998 quotes an issue of Military Medicine that says, "Even military physicians, who should be more prepared than civilian doctors, aren't sure about their capability of handling such a situation: the June 1998 issue of Military Medicine reported that only 19 percent of military physicians were confident about providing care in 'NBC' situations. The majority of those confident few - - 53 percent - - were USUHS graduates." And Dean, if you have any comments on that Reporter article, I would appreciate that.

It is not the intent of this legislation to create new community standards of practice. We must recognize that diseases such as smallpox, botulism, and the plague are not normally seen around the country.

I noticed this morning in the press that the family of one of the postal workers who died has already obtained and filed suit over that death.

Family physicians all across the country are not looking for anthrax, botulism, smallpox, and other such diseases. So I just want to make sure, and be on the record for legislative intent, that I am not interested in setting new community standards with regard to health care, nor am I trying to lay ground work for the many trial lawyers out there.

I think it is extremely important that we disseminate the expertise that we have, so that doctors, in their diagnostic analysis, begin to think about other things from what they normally see in their family practices.

At this time, I will turn to Ms. Carson, the Ranking Member, for any comments that she may have.

CLOSING STATEMENT FOR CHAIRMAN BUYER

I would like to once again thank all the witnesses for being here today and for providing us such insightful and compelling testimony.

We particularly appreciate and to want to thank Dr. Omenaca and Dr. Hill who traveled from Florida and Mississippi to participate in today's hearing.

It is evident from our witnesses' testimony today that there is a serious deficiency in our medical education institutions core curriculum in not teaching our Nation's future doctors and current practitioners to recognize, diagnose, and treat diseases and medical conditions resulting from a terrorist arsenal of weapons of mass destruction.

I strongly encourage all of my colleagues to cosponsor H.R. 3254, the "Medical Education for National Defense in the 21st Century Act." This important bipartisan legislation defines the new education requirements for our current and future health care professionals in this new world since September 11th.

THE ATTENDING PHYSICIAN
UNITED STATES CAPITOL
WASHINGTON, DC

Statement of John F. Eisold, M.D. to the
Subcommittee on Oversight and Investigations
Wednesday, November 14, 2001

Introduction

I am Dr. John F. Eisold, Rear Admiral, Medical Corps, United States Navy, Attending Physician to Congress. On October 15, 2001, my office, along with the Capitol Police, responded to an anthrax incident in Senator Daschle's office. Thank you for inviting me to share with you some thoughts about our response and the importance of education and training in consequence management.

Background

Issues regarding weapons of mass destruction (WMD) do not merely involve security issues with investigative and prosecutorial components. They are true medical events that require specific clinical responses that must be taught, learned and practiced. It is no different than learning how to approach other medical conditions, such as heart disease. The management of WMD events occurs at several levels which include preparation, first response, public health response and individual provider response. While each individual level requires a different knowledge base, a basic level of understanding is required by everyone. Let me briefly review each level.

Preparation/First Response

My Office provides the first response for all medical emergencies and WMD events on Capitol Hill. To be ready for such an event as the October 15th anthrax incident, my personnel have had regular training in responding to chemical and biological terrorist events. This training has often been done in coordination with the Capitol Police. In addition, we had an initial cache of medicine readily available for use in such an event. My Office also had adequate testing supplies and had already identified a reference lab capable of processing the samples. Furthermore, relationships were in place to be able to tap into a full Federal or Local Health Department response should back-up have been required. This was our state of readiness on October 15th.

Public Health Response

In a situation where an incident can rapidly overwhelm the resources of an individual clinic, rapid reinforcements are necessary. Within a day, we began to coordinate our

efforts with Federal resources. Soon, the Office of Emergency Preparedness (under the Department of Health and Human Services), the Centers for Disease Control, the National Institutes of Health, Department of Defense personnel from all uniformed services and multiple additional government labs were available for consequence management. The Commissioner of Health for the District of Columbia offered assistance on the day of the incident. I indicated that I would rely on the Federal response, not knowing what was about to befall the District. Overall, the support I got was immediate, adequate and reflected a superb level of preparedness on behalf of the Federal government and the Department of Defense. This is the standard for which state and local governments should strive.

Individual Provider Response

Healthcare providers must acquire the knowledge to be able to handle the medical consequences of WMD incidents. Victims will present in offices and emergency rooms for treatment. Signs and symptoms need to be recognized, diagnoses need to be made and proper protocols and algorithms need to be employed to ensure quality and expeditious care. Although the body of knowledge exists and many guidelines already are available, the importance of including this knowledge in continuing medical education has been lacking until now. My experience with the October 15th anthrax incident has been gratifying with respect to the professional way in which local and distant providers responded. They wanted timely information and up-to-the-minute guidance. They wanted to share with each other and learn from our experience. Numerous phone calls and a daily district-wide conference call addressed many probing issues as providers struggled to provide their patients with the best medical care. In fact, on October 27th, I spoke at an Infectious Disease symposium on bioterrorism with over 400 people in attendance. The events surrounding the October 15th incident demonstrate a pressing need for heightened awareness within the medical community. Healthcare providers throughout the country have proven to be eager self-starters who will learn if given the tools and opportunity.

Medical Education

I have been involved with medical education throughout my career, now serving in my 25th year as a member of the teaching faculty at the Uniformed Services University of Health Sciences (USUHS). WMD issues have been a part of the medical curriculum at USUHS and the curriculum provides a template for our nation's medical schools and graduate medical institutions. The entire medical community must take the lead in the development of such training however. Medical curricula, rigid as they can be, follow tried

and true academic principles that respond to needs in the community. For instance, when I was in training, alternative medicine, nutrition, genetic engineering, etc. were not in my medical school curriculum but they are now. When a valid medical training need is identified, the professional organizations that guide medical training like the American Medical Association, the American Association of Medical Colleges, numerous specialty societies, the Accreditation Council on Graduate Medical Education, the Liaison Committee for Medical Education, Residency Review Committees etc. will find ways to incorporate such training into standard curricula. Medical educators and healthcare providers are dedicated professionals who will do the right thing and can accomplish this vital task, I am sure.

Closing

In summary, the October 15th anthrax incident on Capitol Hill highlighted the need for training in WMD threats for the average practitioner. I am sure there is a need for many local health departments and first responders to look at their preparation as well. These WMD issues are daunting but manageable with proper training. Clearly, there is a need for a partnership between the medical community and federal, state and local agencies. It is an important task ahead and I hope that the proper balance can be found. Thank you.

TESTIMONY OF

CARLOS OMENACA, MD, FCCP,
INFECTIOUS DISEASE AND CRITICAL CARE SPECIALIST
AT CEDARS MEDICAL CENTER IN MIAMI

BEFORE THE
SUBCOMMITTEE ON OVERSIGHT AND INVESTIGATIONS

of the VETERAN'S AFFAIRS COMMITTEE

U.S. HOUSE OF REPRESENTATIVES

November 14, 2001

Mr. Chairman and members of the Committee, thank you for inviting me to testify at this hearing. I am Carlos Omenaca, MD, FCCP, Specialist in Infectious Diseases and Critical Care Medicine practicing in Miami, Florida. I was directly involved on the diagnosis and treatment of inhalational anthrax in one of the cases recently diagnosed in Florida.

I was asked to share my personal experience in the management of such an unusual case, in order to place in perspective and review the roles of the Departments of Veterans Affairs and Defense in educating the Nation's medical students and current health professionals to diagnose and treat casualties when weapons of mass destruction have been used.

What if you were confronted with a large number of people suffering from an unknown severe illness? How would you decide what they were suffering from? How would you determine if a biological weapon was involved? How would you treat them? How would you keep the disease from spreading to others? These are all questions that belong to the introduction section of a course in Bioterrorism and Biological Warfare. None of them crossed my mind six weeks ago when I was asked to evaluate a 73 year-old man admitted to the hospital with a severe case of pneumonia. What initially looked like a flu-like illness and evolved to a rapidly progressing bilateral pneumonia, was confirmed days later as the second case on inhalational anthrax, third case in 25 years in the United States.

As a result of that initial suspicion of a possible second case of anthrax exposure in the same place of work, the level of alertness in the Nation for a potential bioterrorist attack increased dramatically. Hundreds of people were tested for possible exposure to the anthrax bacillus. Only a few tested positive. Of those, fewer acquired the infection, and only four died from a lethal and rapidly progressing infection. People receiving prophylactic antibiotics are counted in the thousands. Our patient, managed by a multidisciplinary team, was discharged home in good condition after 23 days of

hospitalization, including several days of stressful care in the ICU. Two other patients, diagnosed of inhalational anthrax were recently released home safe.

These facts seem on one hand concerning and even frightening, given the large number of people potentially exposed to a lethal infection. On the other hand, they may resemble something close to a success story, given the low number of casualties and people affected with a real infection. However, the truth is that, behind those statistics and success stories, there is a tremendous amount of frustration, confusion, lack of information, and in some cases, chaos. We were just lucky, not to have lost more lives during these weeks. In my opinion, we are not sufficiently prepared for a large or even small scale bioterrorist attack.

Our medical personnel, including myself, do not have the training to recognize illnesses that have not occurred in this country in decades. Smallpox, anthrax, plague, Q fever, tularemia, brucellosis, viral hemorrhagic fevers, botulism, are among the pathogens utilized as biological weapons. We rarely see these infections in this country in the XXIst century. They are not emphasized in the core curriculum in our specialty programs. Remember, "you do not diagnose what you do not think of, and you do not think of what you do not know about". Some of the clinical presentations are almost forgotten in our most recent medical publications. Some of them, as we are currently seeing in the cases of inhalational anthrax, are being updated in terms of their clinical presentations, newer diagnostic tools, such as DNA testing, and therapeutic means, with the latest groups of antibiotics. Research is needed to test latter against biological warfare agents.

The degree of alertness of a potential bioterrorist attack is key in the prompt diagnosis and successful management of potentially affected people. Early treatment makes a difference in devastating infections such as pneumonic plague or inhalational anthrax. Without this level of continuous awareness, infections caused by biological warfare agents will not be timely diagnosed, and lives may be lost. Continuous Medical Education (CME) targeted to all practitioners would serve as a tool in maintaining open eyes towards the diagnosis of future exposure to biological agents.

A greater degree of coordination between doctors directly involved in the management of patients suffering from a bioterrorist attack and official institutions is needed. I detected potential deficiencies in communications between clinicians, Health Departments and perhaps the CDC. They all should work together in a very standardized and coordinated effort. Our doctors need training when it comes to a team effort with these institutions with which they do not work in their daily practice. Teaching specifics about medical ethics to keep classified information confidential, while keeping patients and families punctually updated about their clinical condition, are needed.

Our healthcare workers do not seem prepared to deal with unknown infections. I have seen tremendous confusion and stress among nursing staff caring for our patient diagnosed with inhalational anthrax in Miami. I sensed the same degree of concern and

lack of information among most of the nurses in our emergency departments and ICUs. They have not been trained to care for this type of patients.

Our laboratory technicians and ancillary personnel have been overwhelmed by large numbers of samples reaching their premises for testing. I was sensing lack of standard procedures and perhaps some degree of disorganization when samples were collected, labeled, and sent to outside laboratories for specialized testing during the management of our patient with anthrax in Miami. I would not be surprised if similar situations have occurred in New York, New Jersey and Washington DC. A greater degree of coordination is needed when two or more institutions are involved in the care or screening of people potentially suffering from a bioterrorist attack. Written policies to this respect should be implemented.

In summary, a number of potential deficiencies in our system have been recognized during the management of a patient diagnosed with anthrax in Florida. All of them are the product of inexperience on treating such cases. Most of them are easily amendable by implementing written policies and enhancing our educational system. Strategies that deserve further discussion and possible incorporation to our educational programs would include among others the following:

- Incorporate a comprehensive Introduction to Bioterrorism and Biologic Warfare as a new subject which should be part of the core curriculum in Medical School, Residency, and Fellowship Training Programs.
- Dedicate special attention on the diagnosis and management of individual pathogens used in Biologic Warfare when studied as part of the current core curriculum.
- Prompt review of the medical literature and update on diagnostic and management strategies for each individual agent identified as a potential biologic weapon.
- Incorporation of mandatory CME credits for all practitioners in the United States as part of the licensing requirements.
- Establish written policies aimed to coordinate communications between clinicians and government officials.
- Create an educational program on Biological Warfare aimed to nursing staff and health care workers, including laboratory technicians and ancillary personnel.

It is vital that prompt action take place in order to better deal with potential future exposures to biological agents.

Mr. Chairman and members of the Committee, I am honored to be asked to testify today in this hearing. I would be happy to answer any questions the Committee may have.

Thank you.

Testimony before the House Committee on Veteran's Affairs
November 14, 2001

Susan Bersoff-Matcha, MD
Kaiser Permanente

Good morning. Mr. Chairman, Members of the Subcommittee, I am grateful for the opportunity to share my experience as an infectious disease specialist in treating two of the patients who contracted inhalation anthrax. My name is Dr. Susan Matcha. I am a physician with the Mid-Atlantic Permanente Medical Group and one of more than 11,000 Permanente physicians nationwide who provide care to more than eight million Kaiser Permanente members in eight states, including Maryland and Virginia, plus the District of Columbia.

In my testimony today, I would like to talk about two areas: my experience treating patients with inhalation anthrax and Kaiser Permanente's response to the anthrax crisis.

As a Permanente physician, I practice as part of a team of infectious disease specialists, alongside numerous other physicians with virtually every specialty and subspecialty represented. Our physicians are used to working together, and we know how to mobilize ourselves as different needs arise. The integrated care we provide to Kaiser Permanente members provides us with broad support and resources. In this instance, this has meant rapid consultation among specialists, the ability to develop and disseminate practice guidelines that effectively communicate our state of knowledge, and coordinated collaboration with the Centers for Disease Control and other public health authorities.

Immediately after the tragedies of September 11, the threat of bioterrorism suddenly became real. The seven infectious disease physicians in my department at Kaiser Permanente began reviewing the state of our knowledge about different biological agents. We consulted textbooks, the medical literature, and the CDC website to increase our understanding of anthrax as well as other potential agents including botulism, smallpox, and tularemia.

Kaiser Permanente already had developed clinical practice guidelines for bioterrorism as part of our emergency preparations for Y2K. Our infection control committee, led by one of my infectious disease colleagues, updated them soon after September 11.

While we hope our work has contributed to the public health, my principal responsibility is caring for patients. I would like to share with you a brief chronology of the care provided to the two patients I have personally treated. To protect their privacy, I'll call them Patient #1 and Patient #2.

Patient #1 came to the Kaiser Permanente Woodbridge Medical Center on Friday, October 19. He had been ill for three days with fever, malaise, muscle aches, and sweats. At that time the Brentwood postal facility was not known to be an exposure site. But the internist who saw the patient was concerned about the severity of the patient's symptoms. Since the patient acknowledged he had never felt that sick before and that he suspected he had been exposed to anthrax – even though a call to the public health department again confirmed that Brentwood was not a known site – he sent the patient to Fairfax Hospital.

The emergency room physician at Fairfax drew blood for routine tests as well as cultures, and also ordered a chest x-ray which showed some extra shadows in the middle of the chest. Because of these shadows, a CAT scan of the chest was performed. The findings were thought to be consistent with anthrax, and the patient was started on IV Cipro.

Shortly after midnight Saturday morning, I was called about the patient. When I arrived at the hospital, the CDC and health department had already been notified. Within 11 hours, the blood cultures were growing an organism consistent with anthrax. The blood was sent to the CDC and the Virginia Department of Health for confirmatory testing. During this time, I was in constant contact with the CDC. We discussed adding additional antibiotics to the Cipro, which at the time was the only FDA-approved antibiotic for treating anthrax. The CDC made some treatment suggestions based on theoretical evidence and what is known about the behavior of

similar organisms. Although I received input from the CDC based on laboratory research, no one had experience treating human anthrax patients.

Ultimately, as the treating physician, I was responsible for writing the orders and caring for the patient. I ordered rifampin because it works well fighting many gram-positive organisms and has the ability to penetrate white blood cells to kill organisms that have already been engulfed. I also added clindamycin because it has been shown to interfere with toxin production in other bacteria.

With respect to patient #2, he called our Kaiser Permanente medical advice line on Saturday, October 20. The advice nurse was concerned about his symptoms, headache and fever, and she referred him to a physician in our Fall Church Medical Center urgent care department that afternoon.

The physician there was concerned that Patient #2 might have meningitis and sent him to Fairfax Hospital for a spinal tap. The Fairfax Hospital emergency room physician called me with the results and mentioned in passing that the patient was a postal worker. I asked him to find out exactly where the patient worked. When I heard Brentwood, where I knew Patient #1 worked, I remembered that anthrax could cause meningitis and asked him if he had ordered a chest x-ray. He had not. I advised the emergency room physician to obtain blood cultures, and then immediately give the patient a dose of IV Cipro. Once this had been done, the patient was to have a chest x-ray.

The chest x-ray was difficult to interpret, so a CAT scan was done. The results of the CAT scan were similar to the first patient's. Both showed enlarged lymph nodes in the chest as well as pleural effusions: puddles of fluid in the space around the lungs. Fifteen hours later, Patient #2's blood cultures also returned with a gram-positive bacteria, consistent with anthrax. At that point, I added rifampin and clindamycin to his regimen as well.

In addition to the numerous calls I made on that weekend to the CDC and health departments that weekend, I also called the chief of our medical group's infectious disease department, Dr. Miriam Cameron, to let her know about the two patients. Together with Dr. Adrian Long, president of the Mid-Atlantic Permanente Medical Group, and Marilyn Kawamura, president of Kaiser Foundation Health Plan of the Mid-Atlantic States, she helped organized a conference call so our organization could respond effectively to this anthrax crisis.

The elements of our response included several key steps: establishing an emergency operations center, updating our clinical guidelines, reaching out to our patients, expanding our capabilities, and helping in the community.

Emergency Operations Center

The genesis of our emergency operations in this crisis was Y2K. Kaiser Permanente developed an emergency plan in preparation for what we thought might happen as the year 2000 began. This plan was valuable to us when bioterrorism hit. The manual that was created for Y2K included operating procedures for staffing (medical and administrative), equipment (including a generator with the capacity to run for 2 weeks), communications (internal and external), and a hotline.

Kaiser Permanente's response to bioterrorism was centralized in our Emergency Operations Center (EOC), which became fully operational on October 23. Early activation of our EOC was vital to our successful and orderly response to this crisis. The EOC provided various avenues of communication: email, voice mail, and phone conferencing that connected the entire Kaiser Permanente region. We held conference calls several times a day to discuss what we had learned since the last call, the progress of each patient, the volume of patient calls coming in to our advice nurses, and the volume of appointments at our medical centers.

As the number of designated exposure sites and possible exposure sites increased, there was great demand placed on our infectious disease team. We set up a hotline in our EOC for non-urgent questions, which was covered 9-5 by a nurse who has the latest clinical practice guidelines and access to an infectious disease physician. Emergency calls went directly to one of us for live consultations.

Clinical Practice Guidelines

Clinical practice guidelines describe and instruct the triage and treatment of patients by physicians and advice nurses. The list of designated exposure sites was updated as we received news from public health departments. Different guidelines were detailed for stable and unstable patients, symptomatic and asymptomatic patients. The guidelines listed all phone numbers for public health departments. Any and all other relevant information was included in each update. New information was clearly identifiable. For the benefit of all our physicians as well as the advice nurses, we addressed what symptoms to look for and what questions to ask the patients, such as asking where they worked.

The process we had in place for the use of clinical protocols served us well. The information cascaded down from infectious disease specialists to everyone on the front lines: internists, family practitioners, advice nurses. Our organization's ability and dedication to update and distribute them frequently enhanced the effectiveness of clinical protocols.

Since Kaiser Permanente is used to communicating with multiple jurisdictions and dealing with different sets of rules, it was natural for us to coordinate and communicate with the CDC, the departments of public health, and different political entities. We shared information about our patients, and we shared our clinical protocols. Johns Hopkins University Hospital, Inova Fairfax Hospital, and others used our protocols as their guide for patient diagnosis and treatment.

Reaching out to patients

Kaiser Permanente has more than 530,000 patients in Maryland, Virginia, and DC. Each of these patients has a medical record number and an electronic medical record. Through our multiple information management systems, we can track data to help us respond to issues. For example, as soon as we understood that postal workers at Brentwood could be at risk, we identified all our members who work at the Brentwood post office by the telephone exchange they provided to us for their work number.

A cadre of nurses volunteered to contact all 237 Brentwood employees. Nurses asked our members if they had gone to DC General for testing, if they had received their medicine, were they taking it, and how did they feel. People who were not taking the medication, for a variety of reasons including suspected pregnancy, were encouraged to take it medication as appropriate or to come in and see a doctor. Some people were directed to an emergency room. Appointments were offered to anyone with any symptoms.

We can use this system to communicate with all our members or a subset of them. For example, we could call all our members to remind them about flu vaccines – which is something we are currently doing, or for mass immunizations.

We were able to instantly create a special category in the medical record for this current bioterrorism crisis to identify, collect, and sort anthrax-related information. And we were able to generate hospital admissions and emergency room visit reports that were valuable to us and to the DC Department of Health staff, who said it was the best information they received from any of the area health care providers.

The importance of physicians using the electronic medical record system was reinforced. Most infectious disease physicians were spending time in the hospitals. To make it easier for us, we could dictate our notes and have them entered into the electronic medical records to keep them up to date.

Expanding our capabilities

Because the anthrax crisis was so fluid, with different parts of the Washington area being affected at different times, we had to be fluid in our staffing at our medical centers and urgent care centers, as well as in area hospitals. Because of the integrated nature of our organization, we were flexible enough to shift people quickly throughout our region and other parts of Kaiser Permanente.

Because we are part of the larger Kaiser Permanente organization, we were able to draw on other resources. Physicians from other regions came to our assistance. We had infectious disease physicians and primary care physicians providing us support in a variety of ways. Some of them saw our HIV patients, others took routine office appointments, supported our advice nurses, and helped in the EOC.

The out-of-state doctors had to be licensed and credentialed very quickly to work with patients. The State of Maryland was extremely cooperative. Our credentialing department processed the paperwork swiftly after the State approved the physicians.

In part because of our resources as a large organization, we were able to obtain large quantities of medication and vaccines. On Friday, October 26, a decision was made to get enough doses of Cipro in case we had to treat all our patients who are postal employees and their families. We needed 10,000 doses, and we had them by Monday, October 29. We also obtained 100,000 doses of flu vaccine. And we already have a plan in place to distribute medication to a large population and will be testing it with the flu vaccine this year.

As the anxiety increased in the general population, our medical centers organized and announced group appointments. These were helpful to our members with justifiable concerns about anthrax exposure, as well as those who were concerned but had no significant risk factors. Patients from the group meetings who wanted to be seen individually were seen individually.

Pitney Bowes management called us for help in the early stages of this crisis. They have many employees who are contracted to the postal service, and some work in the Brentwood facility. These individuals had concerns about anthrax exposure, but could not be seen at DC General because they were not postal employees. We agreed to test 300 workers, some of whom are members of Kaiser Permanente, some who are not. While we were doing blood testing and x-rays, we found a lung mass in one person, hypertension in another, and other conditions of concern unrelated to anthrax. All of these patients were referred to their physicians for follow-up.

To help deal with the emotional trauma our patients were experiencing, we arranged for our mental health providers to be available at all our urgent care centers. In fact, we have had group meetings available almost every evening since the events of September 11.

Helping in the community

Kaiser Permanente has a long history of community service. It is an integral part of our mission. Prompted by an offer made by one of our leaders, 13 of our Mid-Atlantic Permanente Medical Group physicians volunteered to help the DC Department of Health by providing weekend treatment, evaluation, and counseling at DC General, giving DC health department physicians a needed break.

Conclusion

The events of weekend of October 20th were stressful and humbling. My infectious disease colleagues and I were confronted with a disease that few other clinicians in the world had seen. We felt a responsibility not only to our patients, but also to the broader medical community. As a result, we have taken numerous steps to share our clinical experience. We have posted our guidelines on the Kaiser Permanente website where it is available to physicians across the nation and the general public. We have responded to numerous inquiries from clinicians across the country. Finally, we have written an article for the Journal of the American Medical Association on what we learned about diagnosing anthrax, and we are currently working on another article to discuss what we learned about the course of hospital treatment. When and if other physicians are faced with anthrax, they will know what we did and what we learned.

Again, thank you for inviting me to speak to the Subcommittee. I would be pleased to respond to any questions you might have.

Statement of
The Honorable Frances M. Murphy, M.D., M.P.H.
Deputy Under Secretary for Health
Department of Veterans Affairs
Before the
House Committee on Veterans' Affairs
Subcommittee on Oversight and Investigations
on VA's Role in Educating Health Care Professionals
to Diagnose and Treat Casualties of Weapons of Mass Destruction

November 14, 2001

* * *

Mr. Chairman, I thank you for the opportunity to testify before the subcommittee on VA's role in educating health care professionals to diagnose and treat casualties of terrorist attacks involving chemical, biological, and radiologic agents (CBR). I am accompanied today by Dr. Susan Mather, VA's Chief Public Health and Environmental Hazards Officer and Mr. Kenneth Mizrach, Director of VA's New Jersey Health Care System.

The recent incidents involving anthrax exposure and infection have made clear the possibility of an attack on the United States with unconventional weapons, including chemical, biological, or radiologic agents. Such weapons are capable of inflicting serious harm that could be both widespread and sustained.

The medical consequences of attacks of this kind include both the immediate trauma inflicted and the potential long-term health consequences resulting from that trauma. The types of trauma inflicted could include not only the more obvious physical harm the victims may suffer, but the less visible and often unrecognized psychological trauma, such as post-traumatic stress disorder. Such psychological injuries may manifest themselves only long after the event.

We believe it is of paramount importance that health care professionals throughout the nation receive the education and training that will enable them to better understand and respond to the potential health threats from such unconventional weapons. At a minimum, health care professionals should be able to:

- recognize the chemical, biological, and radiologic agents that may be used,
- identify the potential symptoms of those agents,
- provide emergency treatment where needed,
- assess and implement preventive actions that can be taken to protect victims, providers, other persons, and the treatment environment against contamination from chemical or biological agents,

- understand as fully as possible the potential long-term health consequences that may result from the use of these agents, including psychological effects,
- provide an appropriate course of follow-up treatment, supportive care, and referral,
- understand (and work with state and local public health officials in the areas of) surveillance, decontamination, quarantine, and other issues unique to care of patients exposed to weapons of mass destruction,
- understand how to seek consultative support and report suspected or actual use of these weapons, and
- understand the details of any local emergency response plan.

Since physicians (medical students, residents, and practitioners) are not the only health care professionals who would be involved in providing treatment, we strongly believe that education and training programs should be developed that are appropriate for health care professionals at various levels of their careers. All health care professionals, including, but not limited to, physicians, nurses, nurse practitioners, physician assistants, pharmacists, emergency personnel, and health profession students should receive training.

Under Presidential Decision Directive 62, the U.S. Public Health Service (PHS), in collaboration with VA, works to ensure that adequate stockpiles of antidotes and other necessary pharmaceuticals are maintained nationwide and to train medical personnel at hospitals in the National Disaster Medical System to appropriately treat victims of CBR incidents. VA recently received $832,000 from the Department of Health and Human Services to begin development of the training program. The first phase of this program will involve a comprehensive needs assessment of the U.S. hospitals enrolled in the NDMS and the development and piloting of the proposed training model.

VA has long provided ongoing training for health professionals to recognize and treat the victims of chemical and biological agents, but recently we have significantly enhanced our training efforts to better prepare our employees to recognize and respond appropriately to terrorist attacks. We have developed satellite broadcasts covering biological and chemical warfare issues and other educational tools and programs for those who may be charged to render care to victims of CBR incidents. I will describe some of these initiatives.

- Following the September 11 terrorist attack, we acquired educational programs from the Department of Defense (DOD) and broadcast 12 hours of instruction on biological agents and terrorism and 12 hours of instruction on chemical agents and terrorism. These programs are being broadcast repeatedly at different times of the day so as to be available to all VA employees.

- A 1-hour overview of the medical consequences of biological and chemical agents used in terrorism was first aired on October 16th. The program included expert faculty from DOD and the Department of State. It has been rebroadcast several times and at various hours to assure that all VHA clinical and administrative staff has access to it.
- A 1-hour broadcast on providing treatment for victims of exposure to radiological agents will be aired for the first time tomorrow (November 15th). It features experts on this topic from the private sector, DOD, and VA.
- We are developing a two-part broadcast on chemical agent decontamination. These broadcasts will be aired on November 20 and November 27, 2001. They will be repeated thereafter. The first broadcast will focus on how to quickly and economically establish a decontamination capability at VHA facilities. The second broadcast will focus on decontamination operations. The object of these two broadcasts is to instruct VHA facility leaders, managers, and clinicians on how to establish a decontamination capability for less than $10,000 and in less then 30 days.
- We have developed a one-hour education program on "The Laboratory Diagnosis of Bioterrorism Agents." This program was developed by Aileen Marty of the Uniformed Services University of the Health Sciences and will be broadcast in the near future.
- We have produced pocket cards on chemical agents and biological agents. They will help our employees identify actions to take when confronted with patients presenting after contamination. These cards are now being printed and will be available within days to all VHA clinicians and others who serve on emergency management or safety teams. A similar card on radiological agents is being developed. Additional information on responding to biological and chemical threats and on decontamination has been distributed.
- We are planning a conference on Weapons of Mass Destruction for VHA staff and clinicians and emergency managers from outside VA. This conference entitled PREPAREDNESS through PARTNERSHIP: Integrating Medical Mass Care Management in a WMD Incident will be held in St. Petersburg FL, on January 11th -14th, 2002. The conference will feature expert faculty from the United States and several other nations and will focus on HAZMAT training, clinical training for healthcare providers, and training in emergency management for managers and administrators. (This is but one example of professional conferences and exercises on emergency management and CBR that VA has sponsored or co-sponsored with DOD, the PHS, and other departments and entities.)
- We are developing an Emergency Management Academy that will include continuing medical education and continuing educational unit accredited

modules in tracks targeted for clinicians, clinical leaders, health care facility managers, and emergency managers. One aspect of this academy is a web-based knowledge management site where the most current emergency management-related policies, procedures, and information, including those relevant to CBR will be posted.

- We are currently collaborating with DOD on and will co-sponsor and provide VA faculty for 12 hours of live satellite broadcasts on November 28, 29, and 30, 2001. This series, entitled "Biological and Chemical Warfare and Terrorism: Medical Issues and Response," will be aired throughout the United States at VA and DOD facilities. It will focus on biological and chemical agents that can be used as terrorist weapons, how victims will present to healthcare facilities, appropriate care modalities and how to protect healthcare facilities and staff from contamination while providing timely and quality care. As with previous programs in the series, the program will be videotaped and made available to VA employees who were unable to view the live presentations. It will also be rebroadcast in December.

We have the capability, through our education infrastructure and our education and research cooperatives, to share the programs that we produce with others, thus creating an even better return on investment in terms of preparing the healthcare community to effectively respond to terrorist acts.

We are currently exploring the feasibility of undertaking an effort with DOD and our medical school affiliates to develop and share curriculum for undergraduate and graduate health professionals to prepare them to recognize and respond to the needs of patients who may be the victims of CBR use.

In addition, the Association of American Medical Colleges, in conjunction with other health education organizations and federal agencies including VA, has announced a bioterrorism initiative to help educate and prepare the nation's physician workforce to respond to terrorist attacks. This initiative will focus on the need for information, resources and educational experiences to help medical students and residents deal with the victims of terrorism now and in the future.

VA is well situated to reach a wide audience of practitioners and students through its academic affiliations. VHA is extensively involved in the nationwide training of physicians, medical residents, medical students, nurses, and associated health care professionals. Through partnerships with affiliated academic institutions, VA conducts training and education programs to enhance the quality of care provided to veterans within the VA health care system.

Through these long-standing and close relationships, VA also plays a leadership role in defining the education of future health care professionals to help meet the rapidly changing needs of the Nation's health care delivery system. Today, more than 150 VA facilities have affiliations with 107 medical schools, 55 dental schools, and more than 1,200 other schools across the country. More than half the physicians practicing in the United States have received part of their professional education in the VA health care system. Additionally, VA doctors conduct hundreds of research studies in conjunction with their facilities' affiliated medical schools.

Mr. Chairman, in conclusion let me state that VA is a valuable national health care resource. We stand ready to use our considerable expertise in clinical care, education, and research to benefit veterans and other Americans in this time of need. I will now be happy to respond to any questions that you or other members of the subcommittee might have.

PREPARED TESTIMONY OF VAL G. HEMMING, M.D., DEAN AND PROFESSOR F. EDWARD HÉBERT SCHOOL OF MEDICINE

Introduction

I am Val G. Hemming, M.D., Colonel, United States Air Force, retired, Dean of the F. Edward Hébert School of Medicine of the Uniformed Services University of the Health Sciences (USUHS), our Nation's only military school of medicine. Thank you for inviting me to share my views regarding the present responsibility of medical educators to ensure that the Nation's primary care practitioners are educated, trained and prepared for the challenges of weapons of mass destruction (WMD).

Background

Military physicians and military medicine planners and educators have long expected that foes of the United States would resort to the offensive use of WMD. Memories of World War I, when chlorine and phosgene gas were used as weapons, the knowledge that the world powers had weaponized chemical and biological agents such as anthrax, and vivid images of the use of chemical weapons in the Middle East, made it mandatory for American practitioners of uniformed medicine to be educated, trained and prepared to treat casualties of WMD.

Therefore, since the arrival of its first class in 1976, USUHS has provided in-depth instruction for more than 3,100 USUHS School of Medicine graduates regarding the recognition, diagnosis, management and decontamination of persons exposed to WMD. To my knowledge, USUHS is the only school of medicine in the United States with WMD as a formal part of its curriculum.

USUHS and WMD

In the few minutes allotted to me, it is not my intention to inform you of the entire content of USUHS' educational programs in the area of WMD other than to affirm that for more than twenty years, USUHS has integrated WMD-related education and training throughout its standard basic medical science and clinical sciences medical school curricula. Where appropriate, this background knowledge is supplemented with specific WMD course work. All such courses are organized and taught by experienced active duty and retired uniformed subject matter experts, who also prepare the students for two practical field exercises: Operation Kerkesner and the Bushmaster Exercise. These exercises require our military medical students to demonstrate their WMD education and training during rigorous, graded, week-long combat simulations at the Marine Corps base at Quantico, Virginia, conducted at the end of the first year of medical school and at Camp Bullis, Texas, conducted during the fourth medical school year.

A Solution Using Existing Accrediting Organizations and Procedures

It is evident that modern care health practitioners must be knowledgeable regarding potential WMD agents, risks for their use, detection, diagnosis, decontamination and treatment of patients who might, or have, documented exposure, injury or illness inflicted by WMD. I believe that the most effective means for ensuring the proper education and training for potential first providers for WMD victims and for ensuring the maintenance of essential knowledge and skills is to incorporate a basic set of nationally-mandated education and skill objectives into the Liaison Committee for Medical Education (LCME) -mandated requirements for granting the M.D. Degree. At the residency level of training, additional requirements should be developed in partnership with the Accreditation Council on Graduate Medical Education (ACGME) to add basic WMD education and training to the general requirements for the Residency Review Committee (RRC)/ACGME accreditation of all residency programs. This recommendation is based on the premise that **all** physicians, regardless of specialty, should have a basic understanding of the WMD agents and the potential ways they may be addressed during war or terrorism. Physicians must be able to recognize patterns of illness, means of diagnosis and potential therapeutic measures. Further, I also propose that States include WMD requirements in their licensure processes for primary care providers. Credentialing would then require biennial educational updates before privileges could be renewed. The Joint Commission for Accreditation of Hospitals and Health Organizations (JCAHO) could also expand its standards for disaster preparedness to include the ability of accredited organizations to recognize patterns of illness, and the means to diagnose and treat potential and confirmed WMD.

The North American system for the voluntary setting of standards for the training and certification of health care practitioners has served the Nation well over the past 50 years. This system must be revised with mandatory requirements to ensure that practitioners are prepared to serve their respective communities during these challenging times.

USUHS/Department of Veterans Affairs and WMD Education and Training

Recognizing the substantial experience, existing educational materials at USUHS, and the recognized expertise within each of the Services, USUHS could quickly develop courses, teaching materials and web based materials for use by other medical schools, residency programs, and by the JCAHO.

I thank you for the opportunity to address you today.

STATEMENT

of the

American Medical Association

to the

Committee on Veterans' Affairs
Subcommittee on Oversight and Investigations
United States House of Representatives

Presented by
J. Edward Hill, MD
Chair-Elect, AMA Board of Trustees

RE: DEPARTMENT OF VETERANS' AFFAIRS' AND DEPARTMENT OF DEFENSE'S ROLE IN EDUCATING MEDICAL STUDENTS AND HEALTH CARE PROFESSIONALS IN TREATING THOSE INJURED BY WEAPONS OF MASS DESTRUCTION

November 14, 2001

Mr. Chairman and members of the Subcommittee, my name is J. Edward Hill, MD. I am the Chair-Elect of the American Medical Association's (AMA) Board of Trustees. I am also a family physician from Tupelo, Mississippi. On behalf of the medical student and physician members of the American Medical Association (AMA), we are honored to have been invited to discuss with the Subcommittee the roles of the Department of Veterans Affairs (DVA) and the Department of Defense (DOD) in educating the nation's medical students and current health professionals to diagnose and treat casualties when weapons of mass destruction have been used.

Introduction

The AMA has a long and mutually beneficial relationship with the physicians and physician leaders of the DOD and DVA. The Surgeons General of the uniformed agencies (Army, Navy,

Air Force and Public Health Service) sit in our policy-making body, the AMA House of Delegates (HOD), as voting delegates, as does the senior physician of DVA. Sitting in that same body are delegates appointed from the Association of Military Surgeons of the United Sates (AMSUS), the professional society for federal physicians both uniformed and civilian, and the Society of Medical Consultants to the Armed Forces (SMCAF).[1] Meeting at the same time as the HOD is the National Medical Veterans Society (NMVS) which is composed of physicians who have served in one of the uniformed services in time of war. The NMVS funded the meeting of AMA physicians at the Weapons of Mass Destruction 2000 (WMD2000) meeting held last year which brought together subject matter experts from the major executive departments as well as state, county and municipal health departments.

AMA Policy and Activities

AMA policies relating to terrorism and disaster preparedness have been shaped by contemporary events, ranging from informing the Executive and Legislative branches of government (as well as physicians and the public) of the medical consequences of nuclear war, to condemning the use of chemical, nuclear, and biologic weapons. Since the early 1980s, for instance, the AMA has maintained policies directing the organization to prepare appropriate informational materials for educating the physician population and the public on the medical consequences of nuclear weapons, while supporting cooperative efforts in responding to national emergencies. Other AMA policies also discuss weapons of mass destruction and define the importance of DOD and DVA in our national response.

[1] SMCAF was formed at the conclusion of WWII and composed of physicians who render consultation to the surgeons general. SMCAF has produced an influential "white paper" on the importance of medical education to the

Historically, the AMA has supported collaboration with the Department of Defense to explore ways in which we could cooperate to assure the nation's medical preparedness in the event of a national emergency. The AMA supported implementation of the current National Disaster Medical System. As the nation's attention shifted from nuclear to chemical and biological scenarios, the AMA's attention also was directed to these potential weapons.

Over the last few years, the Journal of the American Medical Association (JAMA) has devoted a series of articles to bioterrorism, and more specifically, to the diagnosis and treatment of a variety of biological agents. An August 1997 issue of JAMA, in fact, was devoted exclusively to the subject "Biological Agents as Weapons." More recently, the AMA's Council on Scientific Affairs (CSA) has devoted five of its reports and many of its activities to ways in which organized medicine can become more intimately involved in disaster preparedness for bioterrorism, and other weapons of mass destruction.

In February 1999, the CSA invited Major General John Parker, Medical Corps, United States Army, the commander, U.S. Army Medical Research and Materiel Command; Scott Lillibridge, MD, of the Centers for Disease Control and Prevention, and Joseph Waeckerle, MD, a physician active in the bioterrorism field within the American College of Emergency Physicians to appear before the Council to prepare the AMA for collaborative efforts with the federal initiatives. At the AMA's 1999 Annual Meeting, the CSA co-sponsored a forum on bioterrorism preparedness in conjunction with our Section Council on Federal and Military Medicine. The CSA also submitted its first policy report, Report 4 of the Council on Scientific Affairs, "Organized

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quality of care rendered in our military facilities and to the readiness posture of the medical departments in time of national need.

Medicine's Role in the National Response to Terrorism." Additionally, the Council formed a Bioterrorism Subcommittee to direct activities in this area over the longer range.

At the AMA Interim Meeting in 2000, the CSA submitted CSA Report 11 "Medical Preparedness for Terrorism and Other Disasters." In March 2001, members of the CSA Bioterrorism Subcommittee and AMA staff represented the CSA at the "Advisory Panel to Assess Domestic Response Capabilities for Terrorism Involving Weapons of Mass Destruction" (also known as the "Gilmore Commission" for its Chair, Virginia Governor James Gilmore, III). The Gilmore Commission's prominence in Washington has considerable potential to promote physician participation in disaster planning and emergency response efforts. The Commission was intrigued by the concept of a public-private entity (as recommended in CSA Report 11, I-00, see below) that could enhance physician and community preparedness and response, and by the potential value of the AMA's Federation of state, county and specialty societies (the "Federation") for dissemination, education, and advocacy efforts. The third and final report of the Commission will address medical and public health response capacity, including possible recommendations for DVA involvement. The Commission's report supported the AMA's adopted recommendations from CSA Report 11.

At the 2001 Annual AMA-Organized Medical Staff Section (OMSS) Assembly Meeting which included representatives from the staffs of military and DVA hospital staffs, Brigadier General Richard Ford, U.S. Air Force, presented "Bioterrorism (Part 1): The Potential for Attacks and Readiness Strategies." The seminar addressed the following topics: the potential for and nature of the threat of bioterrorism; the implications for physicians, hospitals, communities, and the

public; and readiness strategies. Proceedings of the seminar were made available to hospital staffs nationally.

The recommendations of CSA Report 11 (I-00) were adopted by the House of Delegates (HOD). The report directs the AMA to:

1. Call for the creation of a public-private entity (including federal, military, and public health content experts) that, collaborating with medical educators and medical specialty societies, would:
   - develop medical education curricula on disaster medicine and the medical response to terrorism;
   - develop informational resources for civilian physicians and other health care workers on disaster medicine and the medical response to terrorism;
   - develop model plans for community medical response to disasters, including terrorism; and
   - address community physician reporting of dangerous diseases to public health authorities.

As currently envisioned, the public-private entity would be comprised of a core set of key participants, including DVA and DOD. The core group would identify specific tasks designed to enhance local preparedness and response, including educational components, and then would engage the necessary additional participants in order to accomplish relevant goals. Activities would focus on bridging the gap between the local incident and mobilization of federal resources. Creation of the Office of Homeland Security to coordinate all federal response agencies does not mitigate the potential value of this concept, which ultimately would serve to integrate more efficiently local responses with existing federal components.

2. Encourage our Federation to become involved in planning for the medical component of responses to disasters, including terrorism, at levels appropriate to the Federation component and develop a mechanism for coordinating disaster/terrorism planning and response activities that involve more than one component medical society.

3. Encourage the Joint Commission on Accreditation of Healthcare Organizations (JCAHO) and state licensing authorities to include the evaluation of hospital plans for terrorism and other disasters as part of their periodic accreditation and licensure.

AMA Activities Since September 11th

Over the last several years the AMA has been addressing the public health implications and the level of this country's readiness to respond to bioterrorism and other means of mass destruction. Following the September 11th attacks, the AMA's activities have included the following:

- Contact with HHS/CDC began very quickly to determine the level of response that might be needed in communicating more widely to our Federation, our members, and physicians at large. Similarly, contact with the Medical Society of the State of New York was established very soon after the attack. The AMA will maintain ongoing contact with the appropriate sections of the Centers for Disease Control and Prevention, DOD, the Office of Emergency Preparedness (OEP) and the Federal Emergency Management Agency (FEMA).

- The AMA created a mechanism for gathering names of physician volunteers to assist in the response, if needed, which has provided a mechanism for augmenting regional response planning. More than 3,000 physicians responded to our call for assistance, and we sent the list of those volunteers to HHS. We also sent sample information from our Physician

Profiles database, as an example of information that could be provided upon request and should be available to DVA and DOD facilities as part of any National Medical Response System. As part of our effort to respond to the President's recent call for the development of local volunteer networks, the AMA will continue to work with the Administration to identify additional volunteer physicians.

- The AMA website has increasingly focussed on terrorism/disaster response and has been designed to provide resource materials for physicians and the public. In fact, the AMA's disaster preparedness website (www.ama-assn.org/go/disasterpreparedness) has been receiving a great deal of positive feedback and many other organizations are linking to it. Our website provides the most up-to-date and reliable information for the physician on bioterrorism and disaster preparedness, thereby helping physicians screen out the most accurate information on the web.

- AMA elected leadership and staff in several areas have answered hundreds of calls from the media, physicians and the public regarding the medical implications of various types of terrorism.

- Our advocacy team has on an ongoing basis exchanged information with the Executive and Legislative branches of the federal government concerning the clinical and public health implications of terrorist attacks.

- We have communicated with our Federation leadership and encouraged their involvement in disaster response and preparedness and surveyed our Federation, inquiring further what the

AMA can do to assist states in responding to the disaster. We also asked the Federation to share their programs and educational material with us so that we could all benefit from their projects. We will make available the Federation materials to all participants at our House of Delegates Interim Meeting in December 2001.

- The AMA's Office of the General Counsel (OGC) has updated a preexisting (from the Gulf War) summary of rights of reservist physicians called to active duty. Other information for physician reservists has been placed on the AMA Web site.

- Our OGC has conducted a 50-state survey of "Good Samaritan" laws (providing limited immunity from legal liability for negligent medical care provided during an emergency) and has established a method to ensure the expedient recognition of licenses from other jurisdictions. We sought to create a limited legal resource tool to identify jurisdictions that could improve their laws to promote greater physician volunteerism.

- In December 2001, approximately 1500 physicians will gather at the AMA's Interim House of Delegates Meeting. Physician leaders from 102 medical specialty societies and 50 state medical societies will attend the meeting. In response to recent events, the AMA has turned a significant portion of the meeting into educational sessions on bioterrorism for physician leaders. It is our hope that the physicians will take the information back to their states and work with local officials to educate and prepare other physicians and members of the health care community for possible future incidents.

- In addition to bringing in experts to our Interim Meeting, the AMA will be distributing to physicians pocket reference guides on the diagnosis of illnesses resulting from biological weapons and CD-ROMs containing resource information on bioterrorism and disaster preparedness.

- We are also seeking to coordinate our educational efforts with the federal government and state and specialty medical societies. The AMA is for example cosponsoring with the Centers for Disease Control and Prevention a weekly video telecast on bioterrorism. These telecasts are designed to educate physicians on a whole host of issues about bioterrorism and preparedness. To assist further, we are maintaining an ongoing dialogue with the Administration to identify creative ways to educate physicians and the public about bioterrorism and preparedness.

- The AMA and CDC are collaborating to distribute the CDC's Health Alerts to physicians across the United States. Health Alerts generally fall into one of three categories:
  - Health Alert: messages of the highest level of importance, which may warrant immediate action or attention;
  - Health Advisory: messages that may not require immediate action but provide important information for a specific incident or situation; and
  - Health Update: messages that provide updated information regarding an incident or situation (information only).

  To get critical information out as quickly as possible, the AMA will send Health Alerts to our Federation as soon as we receive them. The Federation is urged, in turn, to redistribute the Alerts to its constituents by e-mail or fax as quickly as possible and to post them on their

websites. The AMA will include the less urgent Health Advisory and Health Update information in the regular editions of "AMA/Federation News."

Educating America's Physicians

Both the DOD and the DVA have made important contributions to the education of America's physicians over the last century and continue to do so. The former "Veterans Administration" (VA) issued a policy memorandum (#2) on January 10, 1946, that laid out the foundation for a system of affiliation between hospitals of the VA system and those of medical schools. The legal basis was provided by Public Law 79-293 of 1946. This has blossomed into a rewarding program for both sides. By 1991, 134 of the Veterans Administration Medical Centers had affiliations with 102 of the nation's (then) 127 medical schools and, extending beyond medical schools to other health disciplines, more than 100,000 students, including a third of all medical students, receive clinical experience in DVA facilities. We estimate that some 65% of the nation's physicians now in practice have received part of their training in the medical facilities of the Department of Veterans Affairs. By any estimation, this is an unparalleled success story.

The contributions of the medical departments of the uniformed services have been similarly robust in the field of medical education. First seeking accreditation for graduate medical education programs after WWI, the services have strong programs in all their medical centers and larger community hospitals. The graduates of these programs have consistently proven in national certifying examinations to be at the top of their professions, and upon completion of their military service have become leaders in academic as well as clinical medicine. At the end of the physician draft, DOD established two programs to allow an unbroken supply of physicians for military service.

The Health Profession Scholarship Program of DOD enables thousands of students to obtain a medical degree at civilian medical schools while receiving between 50-132 hours of specific training in public health and disaster medicine, including exposure to the diagnosis and treatment of chemical, biological and radiological weapons. The F. Edward Hebert School of Medicine of the Uniformed Services University of the Health Sciences (USUHS), in providing a cadre of career physicians, has developed curricula to enable its students to prepare thoroughly to deal with the medical aspects of chemical, biological, and radiological (CBR) terrorism and has developed exportable packages for distance learning in these arenas as well as in disaster medicine in the broadest sense.

Full-time physicians in military residency programs are provided specialty-specific training in responding to these threats and the full-time residents of the DVA are an integral part of the nation's national response medical system. Consequently, 2,286 resident physicians are now receiving training in one or another aspect of disaster medicine by either the DVA or the DOD and additional thousands of full- and part-time physicians employed by these departments receive ongoing training to ensure they are capable of fulfilling their missions in times of crisis.

At the onset of the Gulf War, DVA and DOD health centers formalized their plans to create health care centers during disasters in a collaborative arrangement with adjacent civilian medical facilities for the purpose of providing regional resources. This provides a present and formal relationship with the potential to respond to educational needs.

Both DOD and DVA have strong research components that are closely integrated with their clinical and educational purposes. The military research centers have provided a major

component of what is now known about defending against chemical, biological and radiological weapons. The DVA research facilities are leaders in research to advance rehabilitation in both physical and behavioral dysfunction. Most of what is now employed in the management of post-traumatic stress syndrome (PTSS), certain to be a major clinical problem following the events of September 11th and any future such incidents, has been discovered through DVA research. It is clear that the knowledge and experience within the health and medical divisions of DOD and DVA are a national asset, most evident at this time in our history.

At an earlier time in America's history, following WWII and the Korean Conflict, it was understood that the education of physicians needed to include both a personal and community response to natural and man-made disasters. Certainly these include the present threat of weapons of mass destruction, but disasters capable of presenting a sudden mass casualty situation are an ever-present danger in the absence of hostile intent. Earthquakes, tornadoes, tsunami and hurricanes are relatively common, as is the spillage of hazardous material on our highways and railroad tracks. Recent history has also made evident that disturbed domestic individuals acting alone or with the cooperation of extremist groups are capable of injuring or killing scores of people and destroying or extensively damaging buildings and other property. We have evolving federal responses to these events, but the local and immediate response is essential in saving lives.

From 1954 through 1968, the Department of Defense sponsored a voluntary program in U.S. medical schools entitled Medical Education for National Defense (MEND). It required a curriculum that included Disaster Medicine, Management of Mass Casualties, Public Health (inclusive of CBR management), Tropical Medicine (essentially instruction in diseases not seen

in North America) and Environmental Medicine. Although voluntary, every medical school participated, ninety-two at that time. Essential elements of the program included: a national cadre of knowledgeable physicians that assisted each school in the development of a program; a specific faculty member at the school appointed by the Dean to assume responsibility; and an array of educational materials. Following a negative report by the General Accounting Office on March 14, 1968, which identified a lack of performance criteria and potential budgetary problems, the program was no longer funded after 1969.

The National Research Council's Division of Medical Science, a unit of the National Academy of Science, however, issued a report on May 22, 1969 strongly recommending that the program be reinstituted. The report found that there was a great need for all physicians to have these training programs for the good of the general public as well as any military relevance in potential future service. It further stated "there is little likelihood that an effective program of instruction will continue without federal support." I am proud to say the American Medical Association supported this program of Medical Education for National Defense, but unfortunately, the program was not reinstituted.

Seeking the Assistance of the DOD and DVA

Here then are the elements whereby the AMA believes that the Departments of Defense and Veterans Affairs can assist in preparing the nation's medical students and physicians in residency training to manage and treat casualties from natural and man-made disasters:

1. Recreate the Medical Education for National Defense program, expanding it to graduate medical education programs with the following specifications:

- A voluntary program for medical schools (125), osteopathic medical colleges (19) and graduate medical (residency) programs
- Specific curricula objectives
- A national coordinating office (perhaps USUHS)
- Nationally identified subject matter experts (drawing heavily on DOD and DVA staff/faculty)
- Locally identified faculty
- Federal funding

2. Include education and training as part of the regional response preparation of the National Disaster Medical System:

- Many practicing physicians are part of the national defense medical system through their hospital affiliation that has, as the organizing entity in their region, a DVA or DOD medical facility. These are natural alliances for collective education. Materials can be developed further and more faculty can be educated under the educational program described above. Additionally, there can be greater coordination between regional and local education and training programs, which could be incorporated into hospital disaster exercises which are a mandatory standard for hospital accreditation by the Joint Commission on Accreditation of Healthcare Organizations. Many other options are available, given an existent faculty and training materials.

Conclusion

The AMA stands ready, able, and willing to work with the federal and state governments to assist in educating medical students, physicians, and other health care professionals and preparing for any attack using weapons of mass destruction. We would be greatly honored to help in any way possible.

Thank you once again for inviting us today.

STATEMENT

On

The Departments of Veterans' Affairs and Defense's Role in Educating the Nation's Medical Students and Current Health Care Professionals to Diagnose and Treat Casualties When Weapons of Mass Destruction Have Been Used

Before the
Subcommittee on Oversight and Investigations
Committee on Veterans' Affairs
United States House of Representatives

By

Jordan J. Cohen, M.D.
President
Association of American Medical Colleges

November 14, 2001

Good morning, and thank you Mr. Chairman for the opportunity to testify before you on this important subject. I am Dr. Jordan Cohen, president of the Association of American Medical Colleges (AAMC). The AAMC represents the country's 125 medical schools, over 400 major teaching hospitals and health systems, including 74 VA medical centers, 98 academic and scientific societies representing over 87,000 faculty members, and the nation's medical students and residents. The education of our nation's medical students and health professionals is one of our core missions and I am pleased to tell you what the AAMC is doing to address the critical topic of potentially treating victims of weapons of mass destruction.

It doesn't need to be said that everything changed on September 11. The tragic events of that day and the uncertainty that has followed have resulted in new priorities and new responsibilities for everyone, including the AAMC. In representing our nation's medical educators, our key priority is to prepare tomorrow's doctors with the knowledge and skills they will need to carry out our current fight and tackle any future conflicts as they occur.

To address this urgent national need, the AAMC has developed "First Contact, First Response," a plan to ensure that the nation's physicians are ready to respond to incidents of biological, chemical or radiation terrorism. As part of this plan, we are convening a coalition of health education organizations, including the VA, on November 28 in Washington to help us identify and develop educational and informational resources to aid physicians and residents who are likely to be the first to encounter victims of terrorist attacks.

We believe that tomorrow's physicians must begin in medical school to equip themselves with the knowledge and skills required to deal with future terrorist attacks. Medical schools across the country are already working toward this goal through their continuing medical education departments as well as their undergraduate and graduate medical educators. Their efforts comprise a host of activities ranging from hands-on training sessions to one-day seminars to full academic courses. For example, the University of Alabama-Birmingham School of Medicine has designed a new online continuing education course module called "Bioterrorism and Emerging Infectious Diseases." The course is designed to provide practicing physicians and other health professionals with information and education about rare infections and potential

bioterrorist agents. At the Uniformed Services University of the Health Sciences here in Washington, DC, medical students take courses in military medicine, learning the effects of radiological, biological and chemical agents on the human body, and what to do in the event of a suspected exposure – specifically detection, decontamination, and medical countermeasures. Some schools offer specific elective courses related to emergency preparedness such as "Disaster and International Emergency Medicine" at the Medical College of Georgia and Medical Toxicology at the Oregon Health and Science University.

The AAMC has a primary responsibility for the education of physicians when they are in medical school. To ensure that a more systematic and comprehensive set of activities is available to all medical students, we are convening a panel of experts in the defense against bioterrorism to develop explicit learning objectives for medical students and to recommend the educational strategies that medical schools might adopt to ensure that students have opportunities to achieve the stated objectives. Incidentally, we have found this approach to be highly successful in other areas of curricular need, such as population health and medical informatics.

We work in partnership with the American Medical Association and medical specialty societies to arm the physicians who are training right now as residents and fellows in our country's teaching hospitals with the information and tools they need to practice their chosen specialties. That training will now include how to respond immediately and effectively to possible terrorist attacks. It is essential that medical residents and other health professionals receive appropriate education and training because they are among the individuals most likely to be the first contacts for afflicted patients.

The AAMC also has a responsibility in collaboration with the other health education, medicine, public health, and science organizations to act as a catalyst and contributor to the ongoing national dialogue on how to provide all practicing health care professionals with everything they need to care for the American public in times of crisis. The continuing medical education departments at our hospitals and medical schools serve a vital function in this effort. The healthcare workforce is well prepared to respond to situations of mass casualties in which the primary injuries are traumatic in nature, given our longstanding experience with natural disasters

such as earthquakes, hurricanes and floods. There is a good deal more we need to do, however, to be equally well prepared to deal with the potential of chemical, biological or radiological terrorist attacks.

Finally, the AAMC recognizes the unique opportunities for partnerships that exist between academic medicine and the public health system. We have a cooperative agreement in place with the Centers for Disease Control and Prevention and plan to work closely with CDC's expert staff to identify ways to better prepare the physician workforce to deal with bioterrorism. Our members also work closely with the Agency for Healthcare Research and Quality. For example, Johns Hopkins researchers are assessing the best methods to train clinicians for these types of public health events; the University of Maryland and Emory University are collaborating on a project to assess the preparedness of our hospitals to respond to such situations; and researchers at Cornell's Weill Medical College are helping plan a New York City-wide response plan for bioterrorist attacks.

However, for these efforts to be successful, we need the continued cooperation and support of the VA, which has been a mainstay of our multiple missions over many decades. Academic medicine and the VA share the three missions of health care delivery, education, and research, and the affiliation agreements between the VA and medical schools are critical to achieving all three missions for both partners. Currently, 139 VA medical centers have formal affiliation agreements with 107 medical schools. Each year, more than 30,000 medical residents and 22,000 medical students rotate through the VA hospitals and clinics to receive a portion of their medical training. The VA supports yet an additional mission, that of providing backup to the military medical system in times of war or national emergency. For this reason, the AAMC views the VA as an essential partner in our "First Contact, First Response" efforts.

Over the more than 50-year history of affiliations between VA medical centers and medical schools, abundant evidence has accumulated of the advantages these partnerships provide to these three missions. The VA's ability to recruit and retain high-quality physicians and the access of veterans to the most advanced medical technology and cutting edge research are just

two of the unique benefits derived from these relationships. Medical education depends, in part, on the hands-on experience received by students and residents at the VA.

Because a significant amount of medical education is provided through VA settings and by jointly appointed VA faculty, the VA is an essential partner in the AAMC's efforts. We have a history of working well with the VA Under Secretary for Health and the VA's Chief Academic Affiliations Officer, and believe that cooperation is not only possible but will be extremely fruitful. We welcome the opportunity to collaborate with the VA as we develop a strategy to meet this critical challenge facing the nation's health care system.

NEW YORK UNIVERSITY SCHOOL OF MEDICINE

STATEMENT OF
MARTIN J. BLASER, M.D.
PROFESSOR AND CHAIRMAN, DEPARTMENT OF MEDICINE
PROFESSOR OF MICROBIOLOGY, NYU SCHOOL OF MEDICINE
STAFF PHYSICIAN, NY HARBOR VA MEDICAL CENTER

BEFORE THE
HOUSE COMMITTEE ON VETERANS AFFAIRS
SUBCOMMITTEE ON OVERSIGHT & INVESTIGATIONS

WEDNESDAY, NOVEMBER 14, 2001
10:00 A.M.

Mr Chairman and Members of the Subcommittee, thank you for the opportunity to appear before you this morning to share my thoughts on how the Department of Veterans Affairs and schools of medicine can work together to further research in critical bioterrorism-related areas as well as to educate medical students and health professionals in diagnosing and treating the casualties of bioterrorism-related events. I ask that the Committee include my complete written statement as part of the hearing record.

I am Martin Blaser, Professor and Chairman of the Department of Medicine and Professor of Microbiology at the NYU School of Medicine. I am also a staff physician at the NY Harbor VA Medical Center, and I have been a VA physician for more than 20 years. My research laboratory is at the VA and I have always been proud of my VA affiliation, especially now!

The VA medical system is a tremendous national resource. In addition to operating the nation's largest integrated health care system, the system trains approximately 85,000 heath professionals each year in its medical facilities. The VA also has a long history of expertise in diagnosing and treating a variety of diseases with major public health implications. As our government examines ways to improve our nation's capabilities to respond to medical and public health emergencies in a post-September 11th world, collaboration between the VA health system and our nation's medical schools offers a way to address many of the gaps in our current ability to address the consequences of bioterrorism-related events.

As an example of this, I would like to discuss the exciting collaboration underway between the NYU School of Medicine and the NY Harbor VA Medical Center to create the VA-NYU Joint Center for Bioterrorism Research. It is my hope that this collaboration can be used as a model for future collaboration between VA health facilities and medical schools across the country.

NYU Facilities and Efforts

The NYU School of Medicine and its three major affiliates – Tisch University Hospital, Bellevue Hospital Center (Bellevue) and the NY Harbor VA Medical Center (Manhattan Campus) – are located on a single contiguous campus. We are the closest Academic Medical Center to both Wall Street and the Midtown business district. Bellevue Hospital Center is the flagship hospital of the New York Health and Hospital Corporation. It combines both primary and tertiary care capabilities, advanced isolation facilities, and a unique emergency care facility with specialized features in its structure and air handling systems which make it a major site for referral of patients with illnesses resulting from bioterrorism. Enjoying a close working relationship with New York City's Department of Health during recent tuberculosis and anthrax outbreaks, Bellevue may truly be considered the city's major disaster hospital.

Both prior to and since the events of September 11, the NYU School of Medicine and its affiliates have been closely involved with local, state, and federal government officials in preparing for and responding to acts of war and bioterrorism. The recent anthrax attacks which were focused on public officials, news media and postal workers have put into vivid perspective the reality of the threat to public health posed by terroristic biological warfare. In the event that a major bioterrorism attack occurred in New York City, especially involving either the downtown or midtown financial districts, Bellevue would become the major site for hospitalizing victims. The NIH-supported **General Clinical Research Center (GCRC)** located at Bellevue Hospital would enable us to perform physicologic measurements on patients, banking of specimens, and enrolling seriously ill persons (e.g. inhalational anthrax, smallpox, plague) in clinical trials to

determine optimal therapies. It would also enable our scientist to translate new knowledge developed at the Research Center to the bedside.

The School of Medicine has already committed itself to the preparedness effort by creating **The Center for Health Information and Preparedness, or CHIP**. Initial efforts of the center are focused in two areas: (1) the creation of a web site which will provide accurate, up-to-date, and independent information and assessments in terms understandable to both professional and lay readers, and (2) the delineation of the full spectrum of biodefense- related research at all component schools of NYU. As a result of the second goal we expect to foster and create a program of research characterized by collaboration between all members of the academic community on the biological, medical, environmental, psychosocial, and societal questions relevant to biological warfare and biodefense.

Program Elements

Our VA-NYU proposal contains a program of basic and translational biomedical research on the prevention (e.g. by development of vaccines) or treatment (by developing new antibiotics or novel types of antitoxins) of agents with potential as biowarfare weapons. Essential to that infrastructure are modern research facilities in which bench research, animal studies and human clinical investigations can be performed safely, including at the BLS-3 or -4 level. Accordingly we propose to develop such facilities as a major part of the core of our biodefense effort.

Core research program areas will include: infectious disease, clinical pharmacology, pulmonary disease, and toxicology. The infectious disease research would include development of humanized monoclonal antibodies for treatment of bioterrorism agents, development of novel vaccines against bioterrorism agents, and epidemiological studies. Research in the area of pulmonary disease would include animal models, human studies, and in vitro studies. Such research may lead to enhanced diagnosis and novel treatments. Research in the area of toxicology are critical in preparing for the possibility of chemical warfare. Studies would be conducted on nerve agents, highly irritating gases (such as chlorine or phosgene), and other likely chemicals that could be used in a terrorist attack.

The areas of research outlined above hold the promise of translating the results quickly to novel treatments and therapies for victims of biological and chemical attacks. In addition to research, however, the training of our health professionals is a key piece to improving the preparedness of our national health care system. And in addition to its contribution in areas of cutting edge research, VA health facilities around the country have much to contribute in this area as well. As part of the NYU CHIP program we would develop web-based modules for the education of physicians, first-responders, emergency room personnel, and other health professionals about diagnosis and treatment of bioterrorism victims.

Conclusions

Thank you again, Mr. Chairman, for your invitation to appear before the Subcommittee today, and for your interest in this important issue. Our world was forever changed on September 11th, but I am confident that with adequate funding, our nation's academic centers, the VA health system, the Departments of Defense and Health and Human Services, and other key entities will be successful in working together to prepare for any challenge that may lie ahead.

I am happy to answer any questions that the Subcommittee may have.

DRAFT

PROPOSED VA–NYU JOINT CENTER FOR BIOTERRORISM RESEARCH

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Date: November 6, 2001

INTRODUCTION

The NYU School of Medicine and its three major affiliates (Tisch University Hospital, Bellevue Hospital Center (Bellevue) and the NY Harbor VA Medical Center (Manhattan campus) are located on a single contiguous campus between First Avenue and the FDR Drive between 23rd and 34th Streets. We are the closest Academic Medical Center to both the downtown financial district ("Wall Street area") and the Midtown business district (34th – 59th Streets). Bellevue Hospital Center is the flagship hospital of the New York Health and Hospital Corporation. It combines both primary and tertiary care capabilities, advanced isolation facilities, and a unique emergency care facility with specialized features in its structure and air handling systems which make it a major site for referral of patients with illnesses resulting from bioterrorism. Enjoying a close working relationship with New York City's Department of Health during recent tuberculosis and anthrax outbreaks, Bellevue may truly be considered the city's major disaster hospital.

Both prior to and since the events of September 11, we have been closely involved with local, state, and federal government officials in preparing for acts of war and bioterrorism. The recent anthrax attacks which were focused on public officials, news media and postal workers have put into vivid perspective the true reality of the threat to public health posed by terroristic biological warfare. An important strength of this proposal for the VA research center is the existence of the NIH-supported General Clinical Research Center (GCRC) on the NYU campus at Bellevue Hospital. Dr. Rom is the Director of the GCRC, and Dr. Blaser is the Co-director of its Executive Committee. In the event that a major bioterrorism attack occurred in New York City, especially involving the downtown or midtown financial districts, Bellevue would become a major site for hospitalizing victims. The GCRC would enable us to perform physicologic measurements on patients, banking of specimens, and enrolling seriously ill persons (e.g. inhalational anthrax, smallpox, plague) in clinical trials to determine optimal therapies. Examples of such therapies might include adding cytokine blockade (e.g. anti-IL-1) or inhibitors of anthrax lethal toxin. It would also enable our scientists to translate new knowledge developed at the Research Center to the bedside.

The School of Medicine has already committed itself to the preparedness effort by creating a Center for Health Information and Preparedness under the Direction of Dr. Robert Holzman. Initial efforts of the center are focused in two areas: (1) the creation of a web site which will provide accurate, up-to-date, and independent information and assessments in terms understandable to both professional and lay readers, and (2) the delineation of the full spectrum of biodefense-related research at all component schools of NYU. As a result of the second goal we expect to foster and create a program of research characterized by collaboration between all members of the academic community on the biological, medical, environmental, psychosocial, and societal questions relevant to biological warfare and biodefense.

A firm infrastructure is key to attracting the best faculty and shifting institutional research effort into an enlarged program of basic and translational biomedical research on the prevention (e.g. by development of vaccines) or treatment (by developing new antibiotics or novel types of antitoxins) of agent with potential as biowarfare weapons. Essential to that infrastructure are modern research facilities in which bench research, animal studies and human clinical investigations can be performed safely at the BLS-3 or -4 level. Accordingly we propose to develop such facilities as a major part of the core of our biodefense effort.

PROGRAMS

A. **Infectious Diseases**

Infectious Diseases is one of five areas which the Dean of the School of Medicine had in 1999 already identified as appropriate of an increased commitment to research, especially translational research. Our school's programs in Infectious Diseases have been expanding, and are expected to expand in coming years. Although this plan was developed prior to the current interest in biological warfare, it is logical to expect that the current faculty as well as the additional faculty that we are committed to recruit to develop programs of research relevant to biodefense. Several projects relating to Infectious Diseases are particularly appropriate based on our background and experience.

1. Development of humanized monoclonal antibodies for treatment of bioterrorism agents. Ongoing work by Dr. Zolla-Pazner of the NYU Department of Pathology who also is a VA Staff Physician has been aimed at developing humanized monoclonal antibodies directed toward epitopes of HIV. A direct extension of this work and the methodologies developed would be to develop such antibodies to epitopes that are part of the anthrax toxins, or to botulinum toxins, for example. Such antibodies ultimately could be used in the treatment of seriously ill patients.

2. Development of novel vaccines against bioterrorism agents. Our group has extensive experience in the molecular genetics of bacterial virulence. One organism that has been well-studied is *Campylobacter fetus* which can express a finite number of cell surface antigens through DNA rearrangements involving S-layer protein genes. *B. anthracis* possesses two S-layer proteins, and their recombinant expression in *C. fetus* could allow the development of a mucosal vaccine. Expression of the protective antigen in the *C. fetus* S-layer protein gene cassette also could be used to elicit specific immunity.

3. Epidemiologic studies. Epidemiologic studies could be conducted in exposed populations for a number of purposes relevant to bioterrorism. For example, we can conduct surveys to detect the presence of anthrax spores, the rates of PPD conversions, antibody tests for susceptibility after vaccinations, and PCR tests of host cells. Our group has found that PCR of peripheral blood mononuclear cells in pulmonary tuberculosis is as effective as sputum culture in detecting the presence of infection.

2.

B. **Clinical Pharmacology**

The development of the Division of Clinical Pharmacology at NYU in 2000 was aimed to take advantage of the recent advances in our molecular understanding of pathogenesis to develop and assess new therapies. Under the leadership of Dr. Cronstein, new initiatives have begun, and representative projects related to bioterrorism are as follows.

1. Inhibitors of anthrax lethal toxin. In vitro assays suggest that the activity of *B. anthracis* lethal toxin can be inhibited by sulfhydryl-containing molecules such as captopril, an ACE-inhibitor. Although the in vitro effect is reproducible, captopril does not have optimal intracellular penetration. Analysis of related molecules with more optimal penetration characteristics might be useful. One strength of our organizational structure is that in vitro studies could be quickly followed by animal experiments, and if promising, then studies could be conducted under GCRC auspices in the event of human cases.

3.Studies of IL-1 function in anthrax. One of the hallmarks of inhalational anthrax that has been emerging from prior studies is the possibility that IL-1 overproduction is playing an important role in disease severity. We propose to assess the utility of agents that decrease IL-1 production in terms of effects on *B. anthracis* uptake by macrophages and effects on cell lethality. Early studies can be done in vitro in macrophage cell lines, but again the ability to study effective inhibitors, first in experimentally infected animals and then in ill humans through the GCRC, is ideal.

3. Novel therapies for tularemia. Inhalational tularemia could be a weapon of bioterrorism. There has been little study of tularemia, especially concerning improved therapies. Developing immunological approaches as adjuvants to antibiotic therapy may be beneficial. Our group has strength investigating granuloma formation and its modulations. Immunomodulation in animal models of aerosolized *F. tularensis* (to be conducted in BL-4 facilities) could provide new approaches for seriously ill persons.

C. Pulmonary Disease

The Division of Pulmonary and Critical Care Medicine under the leadership of Dr. William Rom has been an outstanding engine of biomedical research. We propose three major efforts for bioterrorism preparedness relating to pulmonary diseases.

1. Animal Models. The Pulmonary group has extensive experience in transgenic mice which can be used to model the effects of recombinant toxins such as lethal toxin from *B. anthracis* or crude extracts. The CD40-/- mouse lacks TNF-alpha signaling and is resistant to acute lung injury in the cecal-ligation puncture model of sepsis. Similarly, we can study signaling pathways with conditional STAT knockouts in macrophages. We have observed that CD40 is one molecule that mediates the effects of cell/cell contact that is essential for full development of an effective Th1 response and for the development of systemic inflammatory response syndrome. Blocking the activation of this receptor may lead to general approaches to blunt the inflammatory response to sepsis in an attempt to improve survival during systemic infection. This is relevant to inhalational anthrax, plague, and tularemia, among other bioterrorism threats. The group also has studied Interleukin-1Beta-/- mice and iNOS-/- mice, in which inflammation and apoptosis are reduced following a challenge such as silica. In this model, they have developed a system of aerosol challenge to quantitate precise measurements of particle burden to the lung. They also have devised a laryngoscope for mice allowing the intratracheal instillation of particulate matter that then can be instilled into the lung. Such a system is ideal to model inhalational anthrax which can be done initially using spores of vaccine strains, and ultimately with spores of virulent strains.

2. Human Studies. The GCRC has two negative pressure isolation rooms for the study of potential human cases of anthrax. These isolation rooms could be used for sample collection, and for trials of novel antitoxin therapies such as ACE inhibitors to block lethal or edema toxin, and aerosolized Interferon-gamma (IFN-gamma). Data from experimental animal challenges with anthrax and tularemia indicate that a Th1 response is inhibited. Our group has used IFN-gamma aerosol to improve TH1 responses in patients with tuberculosis with salutary clinical effects. Importantly, multiply drug resistant strains of *Mycobacterium* tuberculosis (MDR-TB) are potentially highly effective bioterrorism organisms. Our group has found that sputum conversion to negative occurred after one month of aerosol IFN-gamma in all five MDR-TB patients studied. They also have developed functional genomics assays of bronchoalveolar lavage (BAL) cells from human TB and HIV infections. It would be possible to collect BAL and peripheral blood from patients with other types of pulmonary infections (e.g. inhalational anthrax), which should be specific to the particular pathogen. A pathogen-specific gene expression signature would be useful in diagnosis of disease, and may yield clues to novel treatments. For example, it is possible that the cleavage of MAP-Kinase-Kinase by anthrax lethal factor to release massive amounts of pro-

inflammatory cytokines, would subsequently lead to sepsis syndrome. Such a phenomenon would be apparent from genomic analysis of BAL cells and might provide a rationale for using anti-cytokine therapies.

3. In Vitro Studies. Our group is able to isolate human alveolar macrophages from normal volunteers and culture them in the laboratory. Mutant forms of *B. anthracis* Protective Factor can be tested in the presence of lethal factor and or edema factor to determine whether cell entry of the complex can be blocked. Other studies can focus on the release of cytokines, or the control of transcription factors such as NF-kappaB or C/EBP-Beta that control the transcription of inflammatory cytokines.

D. Toxicology

The NY Poison Center is located adjacent to NYU and Bellevue Hospital. Dr. Hoffman, Director of the Poison Center is a member of the Mayor's Bioterrorism Taskforce, as is Dr. Blaser. Examples of the studies to prepare for chemical warfare follow:

1. Nerve gas antidotes.

Nerve gases are some of the most likely chemicals to be used in a terrorist attack against the United States. Fortunately, antidotes such as atropine and pralidoxime (2-PAM) can be effective if administered rapidly. Although these antidotes are routinely administered intravenously, automatic injectors for intramuscular administration have been promoted for a mass casualty event. However, to be effective, a critical blood level of 2-PAM is required. Unfortunately, it has never been demonstrated whether intramuscular administration is able to achieve these minimal blood levels. In previous work, Dr. Hoffman and colleagues have studied the pharmacokinetics of intravenous 2-PAM. We now propose that using human volunteers, we would give intramuscular 2-PAM by automatic injector and use standard pharmacokinetic parameters to examine the efficacy of this therapy. The NYU GCRC could facilitate such studies. We believe that such investigations could guide the appropriate use of automatic injectors.

2. Bicarbonate treatment of highly irritating gases.

Similarly, like nerve agents, highly irritating gases (such as chlorine or phosgene) might be used in a terrorist attack. These gases form acids and free radicals to damage lung tissue, resulting in respiratory failure. A single animal model and some anecdotal data based on human exposures suggest that inhaled sodium bicarbonate (a base) improves symptoms following chlorine gas exposure. Although improving symptoms is beneficial, it is unclear whether bicarbonate has either a beneficial or a detrimental effect on survival, which is, of course, the most important parameter to study. We propose to use a randomized animal model of inhaled chlorine and/or phosgene gas to determine whether inhaled bicarbonate improves survival.
Such studies must be conducted by exposing the animals to the toxic gases within a fume hood. Clearly, if a benefit of this very benign therapy were determined, the results would have significant impact on therapies offered by both first-responders and subsequent health care providers.

Budget: Project Period December 1, 2001 – November 30, 2003

A. Construction

The center would be constructed on the 15th Floor of the NY Harbor VAMC (Manhattan campus). This floor is currently empty and formerly was used for hospital wards. Thus, plumbing, air, wiring, and other utilities necessary for laboratories already are present. For conversion of office space, expenses would be substantially lower.

Wet laboratories 3500 net square feet (@550/nsf project cost including demolition, construction, and fixed items, e.g. benches, fume hood).	1,925,000
BL-3 laboratories 500 nsf (@700/nsf project cost).	350,000
Fixed appliances Autoclave, dishwash, glasswash facility).	100,000
Office space 1000 nsf @100/nsf project cost, for offices, computer terminals, storage	100,000
Construction subtotal	2,475,000

B. Program

Programmatic costs are estimated at $600,000 start-up equipment and supplies and $700,000 operating program costs per year, including technicians, supplies, and small equipment. Many of the programmatic elements including recruiting of personnel, protocol development, human studies approvals and office-based studies can be accomplished during the estimated eight months of construction time.

2,000,000

Total $4,475,000

C. Optional BL-4 laboratory

There are few BL-4 laboratories in the United States. Such a lab is important for handling of very dangerous pathogens or specimens. Examples are smallpox, multiple resistant tuberculosis, anthrax spores.

Signatures:

Martin J. Blaser, M.D.
Chairman, Department of Medicine
New York University School of Medicine
Staff Physician
NY Harbor VA Medical Center

Michael Simberkoff, M.D.
Chief of Staff
NY Harbor VA Medical Center

Robert M. Glickman, M.D.
Dean
New York University School of Medicine

November 6, 2001

Federal Research Awards

FY00

	Number of Programs*	Direct Cost	F&A Cost	Total Cost	% of Total Federal
National Institutes of Health					
FIC	1	32,000	10,473	42,473	0.0%
NCI	50	8,491,083	5,235,935	13,727,018	13.9%
NCRR	6	3,911,059	356,657	4,267,716	4.3%
NEI	11	1,777,139	1,066,242	2,843,381	2.9%
NHLBI	15	2,386,841	1,187,047	3,571,974	3.6%
NIA	18	3,373,093	1,979,026	5,352,119	5.4%
NIAID	47	10,565,269	6,226,396	16,791,665	17.1%
NIAMS	10	1,283,468	782,231	2,065,699	2.1%
NICHD	7	811,976	403,739	1,215,715	1.2%
NIDA	15	4,662,438	1,720,765	6,383,203	6.5%
NIDCD	2	66,674	43,598	110,272	0.1%
NIDCR	3	585,699	269,392	855,091	0.9%
NIDDK	17	3,629,665	2,131,117	5,760,782	5.9%
NIEHS	13	3,733,913	2,175,444	5,909,357	6.0%
NIGMS	19	3,309,934	2,138,823	5,448,757	5.5%
NIMH	13	1,372,838	762,556	2,135,394	2.2%
NINDS	38	6,964,333	4,052,938	11,017,271	11.2%
Total NIH	**285**	**56,957,422**	**30,542,379**	**87,497,887**	**88.9%**
Other Federal Agencies					
CDC	8	856,742	539,767	1,396,509	1.4%
COMMERCE	3	179,155	70,164	249,319	0.3%
DOD	21	2,018,476	1,189,501	3,207,977	3.3%
ENERGY	2	155,166	84,685	239,851	0.2%
EPA	10	2,369,211	1,258,516	3,627,727	3.7%
FDA	1	169,845	43,985	213,830	0.2%
NASA	3	210,627	134,373	345,000	0.4%
NSF	7	616,795	221,483	838,278	0.9%
USAID	1	55,943	16,783	72,726	0.1%
VA	6	652,678	130,537	783,215	0.8%
Total Other Federal	**62**	**7,284,638**	**3,689,794**	**10,974,432**	**11.1%**
Total	**347**	**64,242,060**	**34,232,173**	**98,472,319**	**100%**

* Excluded from count are No Cost Extensions and Minority Supplemental Awards

Total Awards and NIH Research Awards by Department
FY99 and FY00

Department Name	FY1999 All Activity Total	FY1999 Research NIH	FY2000 All Activity Total	FY2000 Research NIH	*NIH Increase (Decrease)*
Anesthesiology	89,422	0	31,389	0	0
Biochemistry	3,402,705	2,868,764	3,513,011	2,709,043	(159,721)
Cell Biology	5,446,380	4,832,595	5,169,170	4,367,776	(464,819)
Dermatology	4,098,614	1,417,617	4,555,266	1,844,857	427,240
Environmental Medicine	16,976,075	9,509,753	16,029,853	8,600,669	(909,084)
Medical Library	0	0	7,250	0	0
Medical/Molecular Parasitology	3,460,692	2,946,211	6,257,729	4,813,376	1,867,165
Medicine	14,277,686	8,216,373	16,332,725	8,334,941	118,568
Microbiology	3,883,850	2,702,320	3,703,540	2,671,283	(31,037)
Neurology	1,107,384	423,572	2,663,851	947,186	523,614
Neurosurgery	1,648,603	1,542,527	1,749,983	1,625,563	83,036
Obstetrics & Gynecology	2,946,496	1,863,400	1,938,096	1,099,604	(763,796)
Ophthalmology	905,422	742,526	1,424,368	1,353,679	611,153
Orthopedic Surgery	770,963	156,007	1,184,778	320,140	164,133
Otolaryngology	42,516	0	124,838	110,272	110,272
Pathology	11,139,458	8,373,631	11,435,151	8,677,727	304,096
Pediatrics	5,272,291	2,386,734	6,557,472	2,745,195	358,461
Pharmacology	4,065,010	2,396,553	4,151,992	2,386,514	(10,039)
Physiology & Neuroscience	4,874,856	3,837,951	4,559,511	3,781,165	(56,786)
Psychiatry	10,673,759	6,568,283	15,708,602	10,979,410	4,411,127
Radiology	285,046	52,576	434,376	304,376	251,800
Rehabilitation Medicine	1,137,184	560,032	680,090	191,550	(368,482)
Skirball Institute	***15,095,051***	***12,586,390***	***14,250,577***	***11,851,889***	(734,501)
Surgery	831,956	530,144	1,807,758	506,270	(23,874)
Urology	997,506	827,646	1,624,885	1,237,536	409,890
Center for AIDS Research	424,159	424,159	1,185,375	1,185,375	761,216
General Clinical Research Ctr	3,549,978	3,549,978	3,354,043	3,354,043	(195,935)
Kaplan Comp. Cancer Ctr	2,562,526	2,101,807	2,282,418	1,818,588	(283,219)
Total	122,109,452 [1]	81,261,542	133,749,753 [2]	87,497,887	6,236,345
Total Excluding Skirball Institute	107,014,401 [1]	68,675,152	119,499,176 [2]	75,645,998	6,970,846

1 Includes $2,914,527 in Dean's Office Student Training and Support Programs
2 Includes $2,216,434 in Dean's Office Student Training and Support Programs.
All totals exclude awards to the Hospital for Joint Diseases.

WRITTEN COMMITTEE QUESTIONS AND THEIR RESPONSES

CHAIRMAN BUYER TO JOHN F. EISOLD, ATTENDING PHYSICIAN TO CONGRESS, REAR ADMIRAL, UNITED STATES NAVY MEDICAL CORPS

RESPONSES TO QUESTIONS FROM THE HONORABLE STEVE BUYER, CHAIRMAN OF THE SUBCOMMITEE ON OVERSIGHT AND INVESTIGATIONS, FROM THE NOVEMBER 14, 2001 HEARING ON "TERROR ON THE HOME FRONT; ARE WE MEDICALLY PREPARED"

1. In your testimony, you mentioned that the "management of WMD events occurs at several levels, which include preparation, first response, public health response and individual provider response." You went on to assert, "while each level requires a different knowledge base, everyone requires a basic level of understanding." What should that basic level of understanding include and how should that information be disseminated throughout the health care community?

The basic level of understanding required by the public health system and individual healthcare providers includes: basic knowledge of how to initially manage the effects of common biological agents used for mass destruction, i.e., anthrax, smallpox, tularemia, plague, etc.; knowledge of resources available and whom to contact in case of such an emergency. This information can be disseminated through Continuing Medical Education courses offered by many organizations and hospitals as well as through the Internet. In addition, medical schools and other health sciences could incorporate such training into their curricula.

2. You spoke about your office's state of readiness on October 15th. Would it be beneficial for all medical facilities to inform the Director of Homeland Defense of their readiness capability?

All medical facilities should be aware of their own organization's capabilities in responding to a mass casualty event involving weapons of mass destruction. Rather than informing Director Ridge's Office of each organization's readiness state, the Director of Homeland Defense should be consulted to determine appropriate guidelines for defining medical readiness. Moreover, these guidelines would probably be tailored based on demographics and areas deemed critical for national security.

3. In your opinion what will motivate the health care education community to incorporate weapons of mass destruction training into their curricula?

I believe that the events of 2001 have provided significant motivation for the medical community to incorporate weapons of mass destruction training into their standard curricula. This motivation, however, must be crystallized and fully implemented if we are to maintain an appropriate level of training within our nation's medical community. Sufficient resources from state and local levels will certainly be required to successfully develop and implement such programs.

CHAIRMAN BUYER TO DR. CARLOS OMENACA

MIAMI HEART CENTER,
Miami Shores, FL, February 9, 2002

Arthur K. Wu,
Staff Director, Subcommittee on Oversight and Investigations,
Cannon House Office Building, Washington, DC.

Dear Mr. WU: With reference to the Subcommittee on Oversight and Investigations' hearing on "Terror on the Home Front: Are We Medically Prepared", that was held on November 14, 2001, I would like to answer the questions posed by Mr. Steve Buyer's letter date January c10, 2002.

In my testimony I made several recommendations, including the need to institute a requirement for some type of training in bioterrorism for health care providers other than physicians. In my opinion, this educational training should be different from the one offered to physicians in terms of its complexity.

Specifically, I would like to recommend three levels of training.

1. Nurses and Physician Assistants.
2. Medical support personnel: paramedics, ambulance, preventive medicine and laboratory technicians.
3. Non-medical: Military and Police force, logistics coordinators, and ordinance technicians interested or involved in medical aspects of biowarfare agents.

Group 1 would receive a training similar to the one offered to doctors. In fact, most of the available courses in bioterrorism are aimed to both physicians and nursing staff without a distinction. Both, doctors and nurses would attend together and receive the same information. However, physicians would focus more in depth in learning medical, physiopathology, and treatment aspects to a more sophisticated level of knowledge to be expanded by medical bibliography provided during the training. Nurses and physician assistances would remain in a more practical level in the management issues of biowarfare casualties. Upon completion of their training, each individual should *have knowledge*, at its level of expertise, of:

- Types of biological agents and their characteristics
- Biological warfare agents posing the greatest near-term threat
- Delivery mechanisms for biological warfare agents
- Signs, symptoms, and time course of biological warfare agent exposure
- Pathogenesis of key agents (more addressed to physicians)
- Selection and administration of pre-and post-exposure prophylaxis and treatment (more addressed to physicians)
- Recommended decontamination procedures for exposed persons and medical environment
- Risks to medical, medical support and non-medical personnel
- Procedures for protecting one's self from agent exposure
- Secondary contamination control techniques

Group 2, medical support personnel: paramedics in hospital and outpatient setting, ambulance drivers, preventive medicine technicians, other medical personnel including laboratory technicians. they would *acquire basic knowledge* in:

- Recognizing when a biological warfare agent attack has occurred
- Initiating appropriate patient treatment at their level of expertise
- Assisting in caring for biological warfare casualties in a clinic or hospital
- Assisting in hospital administration related to biological warfare casualties
- Performing sampling to determine if an area is contaminated by a biological warfare agent
- Decontaminating the medical environment
- Providing information to other personnel to reduce panic
- Agent types and how they work as weapons
- Treat description

Group 3, non-medical personnel: Commanders and Police force, logistics coordinators, ordinance technicians. They need *general information* on biological warfare agents and their potential use as weapons, methods for self-protection, and appropriate medical treatment. After their training the will be able to *understand*:

- Appropriate protective measures before and after a biological warfare attack
- Available detection systems and protective measures
- Risky behaviors
- Basic health measures to halt the spread of infectious diseases
- Methods of decontamination

- Aggressive medical treatment to use in the event of biological warfare attacks
- Types of biological warfare agents and their use as weapons
- Basic signs and symptoms of biological warfare agents in comparison to those associated with naturally occurring infection.

I hope that these recommendations can assist on the Nation's preparedness for biological threats. I will be available for further questions if deemed necessary.

Sincerely,

CARLOS OMENACA, M.D., FCCP

cc: Steve Buyer, Chairman,
Subcommittee on Oversight and Investigations,
U.S House of Representatives, Committee on Veterans' Affairs

Responses by Susan Matcha, MD to Questions from the November 14th Hearing Before the Subcommittee on Oversight and Investigations From the Honorable Steve Buyer, Chairman

Q1. What changes should medical schools make to their curriculum to better prepare health care professionals to respond to casualties that involve weapons of mass destruction?

In light of recent events, I think that it would be sensible for medical schools to include learning about biological, chemical and radiological terrorism in their curricula. Ten years ago, during my second-year pharmacology class, learning about organophosphate (nerve agent) poisoning was part of the standard curriculum. I can still recall the antidotes to give to a patient based on that one-day discussion. We did not have a separate course on agents of terrorism. It is not essential that there be a course dedicated to agents of terrorism, per se. Rather, information on the medical implications of terrorism agents can be incorporated throughout the curricula, across several different courses, where it fits best.

I also do not think that it is necessary to have a separate "specialty" in biological terrorism. First responders (including emergency medical technicians and other rescue personnel as well as emergency room physicians), primary care physicians and infectious disease specialists all should be trained to recognize the signs and symptoms of terror agents. I do not believe it is a good use of medical resources to create a new, highly specialized practice area, and physicians who may never, or rarely use their very specialized knowledge. Rather, I believe that all primary care physicians should have the knowledge to recognize the symptoms of terrorism agents and resources to refer patients to specialists who may have deeper knowledge for continuing treatment.

Q2. What level of responsibility does the medical education system have to ensure that health care professionals are adequately prepared to respond to terrorist attacks involving weapons of mass destruction?

I believe that the medical education system should ensure that health professionals have broad knowledge to address a wide range of patients' medical needs, including the ability to respond to medical needs stemming from a bioterrorist attack. I also believe that health professionals have a complimentary responsibility to continue their learning after graduation. Most physicians will agree that effective practice requires lifelong learning. In addition, individual states require a specified number of hours dedicated to continuing medical education for their physicians. Those physicians who have a need for the information regarding the agents of bioterrorism have ample opportunity to learn about them. By the same token, any physician who

needs to learn about these agents has the responsibility to seek up-to-date information.

Q3. In your medical training did you ever attend a VA-sponsored class or take a course that was offered by the VA educational system?

Throughout my medical education, I had extensive contact with the VA health care system. My medical school, residency and fellowship were all affiliated with Veterans hospitals. As are result, approximately one-third of my medical education took place in VA hospitals. I frequently participated in educational seminars and other offerings in the VA facilities during these years.

Since completing my fellowship, I have participated in several continuing medical education courses. On only one occasion have I attended a session at a VA facility, concerning an HIV clinical trial. With respect to agents of mass destruction, following the anthrax attacks in October 2001, I attended a course on biological and chemical weapons sponsored by the Department of Defense at the Walter Reed Medical Center in Washington, DC.

Congresswoman Carson to Susan J. Bersoff-Matcha, M.D., Mid-Atlantic Permanente Medical Group, Kaiser Permanente

Responses to Questions from the November 14th Hearing
Before the Subcommittee on Oversight and Investigations
From the Honorable Julia Carson
Ranking Democratic Member

1. **In the 11/1 Washington Post article, "Learning as We Go Along," it is written that you had been "reading up on anthrax since the terrorist attacks of September 11." As an infectious disease specialist, what gaps in learning have been filled by your experience, and what can be done in the short term to fill these learning gaps for primary care health professionals?**

   I started reading about anthrax as well as other agents of bioterrorism shortly after the events of September 11th. At that time, the media expanded its coverage of bioterrorism agents significantly, with particular attention to anthrax and smallpox. With increased media attention, fear in the community rose. Patients, family members and friends began asking questions about how to protect themselves and their families, whether or not stockpiling Cipro was a good idea and how and whether to get vaccinated. At about the same time, Kaiser Permanente of the Mid-Atlantic States revised its guidelines for the diagnosis and treatment of an anthrax that we first put together in response to Y2K.

   Prior to the recent anthrax outbreak, the medical literature reported a 90-95 percent fatality rate from this infection. Thus, there was little information available on the treatment of surviving patients. Clearly, my colleagues and I have learned a great deal, but much remains to be learned. It is the responsibility of the physicians who have cared for these patients to share what we have learned by publishing the details of these cases in medical journals. Since the end of October, the Journal of the American Medical Association (where some colleagues and I published an article) and the New England Journal of Medicine have included several articles on the diagnosis and treatment of anthrax. The Internet made this material broadly available to everyone weeks before the journal articles were published.

   Physicians, during their years in training, develop a keen appreciation that effective practice requires lifelong learning. States also have requirements for continuing medical education for their physicians. Physicians who need or want to learn about the agents of bioterrorism have ample opportunity to attend lectures or to read about these agents in the medical journals. At the same time, physicians who need to learn about these agents have the responsibility to seek out up-to-date information.

2. **In your opinion, should a specialty on "biological terrorism" be created and taught at medical schools? Should chemical and radiological terrorism be included?**

   In light of recent events, I think that it would be sensible for medical schools to include learning about biological, chemical and radiological terrorism in their curricula. Ten years ago, during my second-year pharmacology class, learning about organophosphate (nerve agent) poisoning was part of the standard curriculum. I can still recall the antidotes to give to a patient based on that one-day discussion. We did not have a separate course on agents of terrorism. It is not essential that there be a course dedicated to agents of terrorism, per se. Rather, information on the medical implications of terrorism agents can be incorporated throughout the curricula, across several different courses, where it fits best.

   I do not think that it is necessary to have a separate "specialty" in biological terrorism. First responders (including emergency medical technicians and other rescue personnel as well as emergency room physicians), primary care physicians and infectious disease specialists all should be trained to recognize the signs and symptoms of terror agents. I do not believe it is a good use of medical resources to create a new, highly specialized practice area, and physicians who may never, or rarely use their very specialized knowledge. Rather, I believe that all primary care physicians should have the knowledge to recognize the symptoms of terrorism agents and resources to refer patients to specialists who may have deeper knowledge for continuing treatment.

Post-Hearing Questions
Concerning the November 14, 2001 Hearing
For
The Honorable Frances M. Murphy, M.D., M.P.H.
Deputy Under Secretary for Health
Department of Veterans Affairs
From
The Honorable Julia Carson
Ranking Democratic Member
Subcommittee on Oversight and Investigations
Committee on Veterans' Affairs
U. S. House of Representatives

1. The VA has an existing collaboration with the DoD and other agencies on developing and delivering quality education and training programs, such as the Emergency Management Academy, and the Emergency Management Strategic Healthcare Group Technical Advisory Committee. In your opinion, what coordination efforts are further needed between the VA and other Federal agencies in presenting a common front to the threat of biological, chemical, and/or radiological terrorism?

Answer: In order to further enhance the coordination efforts between VA and other Federal departments and agencies in preparedness to chemical, biological, and radiological (CBR) terrorism, several measures should be considered:

- VA needs to work with its partner agencies (DOD, HHS, and FEMA) that support the National Disaster Medical System (NDMS) to ensure that workable response plans are in place and that clinical support personnel and first responders receive the training they need and participate in disaster response exercises to ensure preparedness for responding to both natural and man-made disasters, including use of CBR weapons. VA's full participation in the NDMS is pivotal for HHS and other Federal partners to recognize and appreciate VA's depth of resources. As the largest integrated health care system in the United States, VA, through its hospitals, clinics and counseling centers, clinical and support staffs, academic affiliations, vast education and training programs (including a nationwide satellite broadcasting system and authority to grant credits toward Continuing Medical Education and Continuing Education Units) is a strong Federal presence in many local communities throughout the country. Recognition of VA's resources, as well as interagency planning for applying these resources, will contribute significantly to national preparedness and help avoid duplication or creation of efforts that may in fact already exist through VA.
- As the country's largest integrated health care system, VA, through daily delivery of patient care in every state throughout the county, is in a unique position to monitor and report trends (confirmed/laboratory identification or syndromic evidence of bioterrorism), increasing the likelihood of early

detection and response. Because of this capability, VA needs to be closely integrated into the plans and programs (CDC, state, and local entities) impacting surveillance.

- VA is the only Federal department that manages hospitals throughout the continental United States and Puerto Rico. Therefore, VA medical centers and affiliated medical school partners should be included among those that are eligible for grants to develop state and local hospital preparedness capabilities. As a partner in the National Disaster Medical System (NDMS), one of VA's roles is managing NDMS Federal Coordinating Centers (FCCs). In this role, VA coordinates MOUs with local hospitals enrolled in NDMS, chairs local NDMS committees and coordinates training and exercises on preparedness for weapons of mass destruction (WMD) and other disasters. In addition, VA is represented on Local Emergency Preparedness Committees (LEPCs) where much of the WMD preparedness planning occurs.
- In addition to preparedness measures for potential bioterrorism events, preparedness for chemical or radiological terrorism is also of great concern. VA has been involved in several inter-departmental preparedness initiatives in these areas, particularly with the Department of Defense:
  - VA and DoD have collaborated extensively on several nationwide satellite broadcasts on biological, chemical and radiological issues.
  - VA's Medical Emergency Radiological Response Team (MERRT), an asset cited in the Federal Radiological Emergency Response Plan (FREP), has provided faculty for courses, training and exercises to Armed Forces Institute of Radiological and various NDMS audiences.
  - Through an Interagency Service Support Agreement, the US Army Soldier Biological and Chemical Command (SBCCOM) had provided Domestic Preparedness training at 40 VA Medical Centers, across all 22 VA VISNs.
  - VA coordinates and chairs the annual NDMS conference, the largest educational gathering of disaster responders in the country.
- VA should be included in planning future interdepartmental educational training initiatives.
- Future national initiatives that address pharmaceutical and medical supplies for WMD events should include VA in planning and implementation and other departments need to recognize and use VA's existing capabilities such as prime vendor for pharmaceuticals and national contracts for IV solutions.

It is critical that Federal departments and agencies that are designated as "lead" entities, as well as legislators, not overlook VA, an established medical resource in many local communities across the country, in WMD preparedness planning and implementation.

2. How many laboratories does the VA have that can assist the CDC and others in the identification of biological agents and other infectious diseases?

Answer: It is important to provide some basic definitions in order to answer this question. A biohazard is generally defined as: "An agent of biological origin that has the capacity to produce deleterious effects on humans, i.e. microorganisms, toxins and allergens derived from those organisms; and allergens and toxins derived from higher plants and animals." There are four basic classifications for these biohazards:

BSL1 - agents not known to cause disease.
BSL2 - agents associated with human disease.
BSL3 - indigenous/exotic agents associated with human disease and with potential for aerosol transmission.
BSL4 - dangerous/exotic agents of a life threatening nature.

Laboratory requirements and personnel standards are defined on the basis of the four basic classifications of biohazard. Increasingly stringent standards are required for laboratories working with BSL1 through BSL4 hazards. Laboratories with low-level capabilities cannot work safely with higher-level biohazards.

A Biohazards Material Security Task Force recently conducted a survey of VA laboratory capabilities. The results of this survey showed a total of 195 BSL2 and 57 high-level BSL3 clinical and research laboratories within the VA system. However, it is important to note that these laboratories do not routinely maintain the capability to assess all possible infectious agents, particularly biological warfare agents that are rarely, if ever, observed in the United States. To provide diagnostic capabilities, laboratories would have to undergo specific training and perform specific tests routinely to meet proficiency standards.

It is possible to upgrade some BSL2 laboratories but this process cannot be done quickly because modification of the laboratory facilities (construction) is required and substantial staff training is necessary in order to safely handle highly infectious agents.

Post-Hearing Questions
Concerning the November 14, 2001 Hearing
For
Mr. Kenneth H. Mizrach
Director, VA New Jersey health Care System
From
The Honorable Julia Carson
Ranking Democratic Member
Subcommittee on Oversight and Investigations
Committee on Veterans' Affairs
U. S. House of Representatives

1. In light of the recent events that have impacted the state of New Jersey as well as New York and Washington, this question concerns the Department of Veterans Affairs' (VA's) response to September 11. What was the impact of the terrorist attacks on the New Jersey VA medical facilities? Do you feel your system was prepared? What is being done to further prepare your clinicians and first responders for the next Weapons Destruction (WMD) attack?

Answer: The terrorist attacks of September 11 had direct effects on many of the staff and patients of the VA New Jersey Health Care System (VANJHCS). In addition to the horror experienced by all Americans seeing the events unfold on national television, the fire and subsequent collapse of the World Trade Centers was directly visible from the East Orange campus. Many staff and patients had family and friends who worked in or near the towers, and there was a long period of uncertainty as the telephones were often out or had been destroyed. Some tragically lost family and/or friends in the collapse.

In addition to being near the epicenter of the September 11 events, our facility was also directly impacted by the ongoing concerns of bioterrorism, with the Trenton postal facilities being the apparent source of the known Anthrax letters. White powder scares of various types occurred from time to time. Our Trenton Community Based Outpatient Clinic is next to a warehouse, which was the site of a large police response and hazmat team presence during clinic hours due to such fears. In addition, we treated approximately 10 postal workers who could not or did not receive antibiotic prophylaxis from their employer. We treated veterans who lived near "hotzone" post offices in New Jersey and were concerned about their exposure.

The long-lasting impact of these events on staff and patients is expected to continue to unfold over the next six months to two years, based on the experience of previous disasters.

When events unfolded that one of the local hospitals needed an adequate supply of the antibiotic ciprofloxicin in order to treat postal service workers and others,

VANJHCS staff made a number of contacts, which resulted in a 50,000-dose supply being shipped the next day. In addition, when we were informed that more than 2,000 postal workers in New Jersey needed antibiotic prophylaxis, the VANJHCS was in constant communication with VISN #3 and VACO leaders and made arrangements to meet this challenge.

No organization could possibly be fully prepared for such unexpected events. However, there were good systems in place at the time, VANJHCS had completed disaster drills and training, and rapid response by VANJHCS leadership and staff, with ongoing advice from our Veterans Integrated Service Network (VISN) #3 office and various federal, state, local, and private agencies, provided the facility with needed protection. On September 11, VANJHCS was immediately placed in a state of high alert 10-12 hours post event and for another 36 hours at a lower level of alert. Security measures went into immediate effect to minimize the chances of a terrorist event on VA property. We received no casualties for treatment from the WTC site; however, we supplied the New York Campus of the VA New York Harbor Health Care System with both medical and surgical supplies as well as medical grade water.

Mental health staff at the facility offered immediate services to any employee affected by the disaster, and staff members were reminded of the availability of other support activities of our employee assistance program. A VISN #3 mental health task force met within a few days of September 11, with VA Central Office leadership from Readjustment Counseling Services (RCS), which has a long history of response to various disasters. A plan was developed and implemented to ensure that staff and patients were adequately informed about stress and Post Traumatic Stress Disorder (PTSD) reactions over time. Family and benefits counseling services were offered by VANJHCS staff in Liberty Park, New Jersey, as part of the state-organized response to September 11, in addition to the Networks mental health and outreach efforts in Manhattan (Family Assistance Center).

A month after the event, a team of RCS staff trained in debriefing people affected by disasters came to VANJHCS. Over 600 staff, across our two campuses and over all shifts, attended debriefing meetings. Ongoing frequent town meetings were held by top management to ensure adequate dialogue and support for all staff in the VANJHCS. In addition, all-employee/patient messages providing information on our involvement in activities surrounding the events were frequently distributed from the time of the attacks through several weeks after September 11.

As much information as possible is being made available to staff on various possible terrorist scenarios. VA national leadership rapidly produced a series of satellite broadcasts on the various possible bioterrorist and chemical agents, how to recognize them, and how to treat them. A separate program was prepared on treating victims of exposure to radiological agents. VISN-wide pocket cards were

prepared on these issues to provide clinicians with ready access to this information. Further education is also planned and employees are encouraged to attend these sessions.

Throughout the Network staff members in our mailroom and warehouse areas were offered the use of gloves and masks while performing their roles in the delivery of mail and packages. Other steps taken include the establishment of additional cardiac/pulmonary resuscitation units; purchase of shower stalls for outdoor use to decontaminate patients/staff as needed before entering the facility; and purchase of large quantities of various supplies such as gloves, gowns, masks, and other protection "suits."

We will continue to educate our employees and prepare them for WMD. Our staff is now well educated about Anthrax and to some degree about smallpox, but we have just only begun the education process regarding chemical attacks, which require very specific complex measures according to the agents involved.

2. I know that the Lyons VA Medical Center is home to an inpatient Post Traumatic Stress Disorder (PTSD) treatment center. Was there any increase in PTSD symptoms in the veterans at Lyons and at any of your other VA facilities, and, if so, will these increases be researched to educate military and civilian health care workers?

Answer: The VANJHCS, in coordination with VISN #3 mental health leadership, tracked from the beginning any apparent increases in stress reactions or PTSD development related to September 11. A Network-wide mass mailing went out to all patients who had been seen anywhere in the facility last year, with either a diagnosis of PTSD or depression, inviting them for an immediate appointment. Patients who missed appointments or were felt to be at high risk for a strong reaction were called by their clinicians. There is no question that these events affected nearly all veterans being treated by our mental health services. The content of most sessions revolved around reactions to these events. However, there appeared to be little or no increase in new onset PTSD in veterans to this point in time, and very few veterans experienced a severe enough reaction to warrant inpatient admission. These trends are also being reviewed nationally through the Northeast Program Evaluation Center, which is a mental health analytic arm of VA. Preliminary results of this review indicate no significant increases in mental health utilization attributable to the events of September 11 to date. There is also an ongoing assessment of mental health utilization within VISN #3, and this will continue for the foreseeable future. From past experience, onset of PTSD and increased rates of PTSD are delayed from three to six months after a traumatic event or disaster.

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OFFICE OF THE DEAN

February 7, 2002

Mr. Arthur K. Wu
Staff Director, Subcommittee on Oversight and Investigations
Room 337A, Cannon House Office Building
Washington, D.C. 20515

Reference: U.S. House of Representatives Letter from Representative Steve Buyer, dated January 10, 2002, Subject: Subcommittee on Oversight and Investigations' Hearing on "Terror on the Home Front: Are We Medically Prepared"

Dear Mr. Wu:

Thank you for the opportunity to testify before the subcommittee on November 14, 2001. I am pleased to provide further information and recommendations from the Uniformed Services University of the Health Sciences (USUHS). USUHS is the only federally owned academic health center to include a school of medicine. As such, your questions about education and training regarding "terror on the home front" and medical preparedness are important to us. The referenced letter dated January 10, 2002, poses two serious questions. In concert with my colleagues and fellow faculty members we prepared the following answers:

1. What recommendations would you make to ensure that in the future our nation's medical community is prepared to diagnose and treat victims when weapons of mass destruction (WMD) have been used?

Our answer to this important question mirrors the testimony I provided for the subcommittee on November 14, 2001. As you know, American medical communities have developed independent national oversight organizations to establish training and accreditation standards for medical training and education. The Liaison Committee for Medical Education accredits training for the M.D. degree. The Accreditation Council for Graduate Medical Education sets standards for knowledge, attitudes, and skills for graduate medical education programs. The attendant Residency Review Committees and certification boards (such as the American Board of Internal Medicine, the American Board of Surgery, etc.) ensure entrance levels and maintenance levels of competency for fully trained physicians. The Joint Commission on Accreditation of Healthcare Organizations establishes standards for the operation of hospitals and clinics, as well as standards for credentialing health care practitioners. Sensitive to recent events,

each of these organizations has begun discussing and planning for the inclusion of requirements for medical responses to the use of WMD in their standards for training, graduation, and certification. We believe that each organization named above would welcome encouragement, guidance, and perhaps access to funding to ensure that medical students, graduate physicians in specialty training, and practicing physicians are properly prepared. Their accreditation/certification/credentialing processes would ensure that students and practitioners are prepared to serve their communities with requisite diagnostic and therapeutic skills regarding WMD. Congressional involvement would ensure that students and practitioners were properly prepared to serve their communities with proper diagnostic and therapeutic skills regarding WMD. Congressional interest and support would hasten the timely implementation of these training modifications.

2. Specifically, which segments of your training program do you feel are transferable to medical education programs across the country?

USUHS has a required course in contingency medicine including WMD which is taught by our Department of Military and Emergency Medicine (the only such department in an American medical school). Our first-year medical students utilize an extensive syllabus, prepared by our faculty, on biological, chemical, and nuclear threats. At the conclusion of the first year of medical school, each USUHS medical student must utilize his/her classroom and laboratory training in a week-long field exercise, Operation Kerkesner, at the Marine Corps Base in Quantico, Virginia. Our fourth-year students, during their required course in military contingency medicine, must also utilize their WMD training, including gas mask, protective clothing, and decontamination in a week-long field exercise, Operation Bushmaster, at Camp Bullis, Texas. Most of the curriculum for these courses could readily be shared with other interested medical schools. Expert consultation is also available from faculty members to assist other schools in planning and implementing such a curriculum.

Our Department of Pathology offers courses in WMD which, in addition to the courses noted above, target graduate physicians, other healthcare providers, and first responders. These courses exceed the level of training required by medical students. They include information on biological, chemical, and nuclear weapons and high energy explosives. Instruction includes the medical features and medical countermeasures for live biologic agents, organic and inorganic products, radiation, and other devices of potential use in warfare, terrorism, or criminal activities. These courses review the diplomatic, political, defense and intelligence implications of WMD for humans, plants, and animals. Reading materials and course lectures detail mechanisms for the spread of microbes, toxins, routes of host entry, the pathophysiology of host reactions, and the specific cellular, biochemical and molecular pathology for target organs. A critical

component of these courses is instruction in laboratory diagnosis (including anatomic and clinical aspects of detection), epidemiologic, and forensic investigation of a biowarfare or bioterrorism event. CDR Aileen Marty, MC, USN, the course director, reports that these materials are easily adapted for use by undergraduates in medical schools.

Another important focus for our medical students, resident physicians, and military physicians in medical practice are courses prepared and taught by our Department of Psychiatry's Center for the Study of Traumatic Stress. The Center is recognized nationally and internationally for its leadership in understanding the psychological, behavioral and social consequences of the use of WMD. Faculty members have conducted much original research and are well published and widely respected as teachers and consultants. Their expertise is commonly sought for programs on WMD for medical students, resident physicians in training, military and civilian medical communities, and the media. The Center recently convened two consensus conferences on WMD, including a July 2000 conference titled: "*Planning for bioterrorism: behavioral and mental health responses to Weapons of Mass Destruction* and an October 2001 conference titled: *Planning for biological events: responding to terrorism and infectious disease outbreaks.* Both conferences were attended by nationally and internationally recognized experts. Published conference proceedings will assist research and will be shared with medical communities in their WMD planning. Additionally resourced, the Center could develop more training materials to be incorporated into the education and training of many medical disciplines and allied health professionals.

USUHS has developed an innovative education center for military, medical, and surgical simulations (National Capital Consortium Simulation Center). The Center creatively uses simulated and standardized patients, computerized manikins, endoscopy, and surgical simulation devices, and a variety of computers to instruct and validate training of medical students, resident physicians, and staff trainers. Scenarios to train students and young physicians in the response to WMD have also been prepared and can be shared. Indeed, on May 2, 2002, the University's Division of Military Internal Medicine, Department of Medicine, will be presenting a skills workshop on WMD at the national meeting of the American Association for Internal Medicine.

Recently, USUHS and its expert faculty partnered with eGlobal Medicine, Henry M. Jackson Foundation for the Advancement of Military Medicine, and Lippincott, Williams and Wilkins to develop an online course on nuclear, biological, and chemical warfare and terrorism for healthcare providers. Ten modules developed for the course titled **Medical Response to Weapons of Mass**

Destruction include: anthrax, nerve agents, smallpox, combined radiation injury, mustard, plague, cyanide, incapacitating agents, botulism and Venezuelan equine encephalitis. The web-based course is formatted for anytime/anywhere access for healthcare providers. The course provides an outstanding background for students, resident physicians and practicing physicians seeking to be knowledgeable and competent in this complex area.

In summary, the F. Edward Hébert School of Medicine has many teaching materials prepared for our military medical students and for military resident physicians being trained through the National Capital Consortium, that could be expeditiously exported to other medical schools or other programs training allied health professionals. Furthermore, there is broad expertise throughout our faculty for consultation to external programs or to accreditation groups seeking to incorporate these WMD-related topics and practice skills into their training programs.

Thank you for permitting us to share an overview of our programs. We stand ready to assist however and wherever we can to ensure the nation's health professionals are ready should another WMD event occur.

Sincerely,

Val G. Hemming, M.D.
Colonel, USAF, (Ret)
Dean, School of Medicine

cc:
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Jordan J. Cohen, M.D., President

February 11, 2002

The Honorable Steve Buyer
Chairman
Subcommittee on Oversight and Investigations
Committee on Veterans' Affairs
United States House of Representatives
337A Cannon House Office Building
Washington, D.C. 20515

Dear Congressman Buyer:

In reference to your letter dated January 10, 2002, I can provide you with the following information in response to his questions regarding my testimony to the Subcommittee on Oversight and Investigations on November 14, 2001.

1. *When was "First Contact, First Response" first drafted and when was it implemented?*

The "First Contact, First Response" plan was drafted soon after the events of September 11 and the subsequent bioterrorism incidents. It was formally announced on November 1, 2001, at a press conference with Senators Bill Frist and Edward Kennedy, and representatives of the American Medical Association, the American Nurses Association, and the American Public Health Association.

2. *In your testimony, you mentioned that several schools offer specific "elective courses" related to emergency preparedness. Please provide the Subcommittee with a list of these schools. Since September 11, do you believe all medical schools should offer these courses?*

As of November 1, 2001, ten medical schools had specific coursework related to bioterrorism and/or emergency preparedness. These schools are listed below:

- University of Mississippi School of Medicine
- University of Nevada School of Medicine
- University of Texas-Galveston Medical School
- University of Texas-Houston Medical School

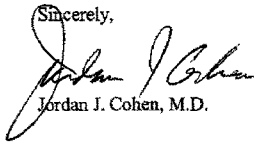
- University of South Alabama College of Medicine
- University of Oklahoma College of Medicine
- University of Wisconsin School of Medicine
- Howard University School of Medicine
- Eastern Virginia Medical School
- Uniformed Services University School of Medicine

Since September 11, the majority of medical schools have added or emphasized bioterrorism and/or emergency preparedness instruction into their existing curriculum. On November 28, the AAMC convened the representatives of medical specialty, medical education, nursing, public health and scientific organizations to develop a collective educational response to biological, radiation, and chemical terrorism.

In an effort to assist the enhancement of educational materials on bioterrorism and/or emergency preparedness in medical schools, the AAMC will convene a panel of experts to provide guidance to medical schools on the relevant content and teaching methods.

I hope that I have provided you with the necessary information. If you have additional questions, please do not hesitate to contact Michael Whitcomb, M.D., on my staff at 202-828-0505 or <mwhitcomb@aamc.org>.

Sincerely,



Jordan J. Cohen, M.D.

Congresswoman Carson to Dr. Jordan Cohen, President, American Association of Medical Colleges (AAMC)

Questions from the November 14th Hearing
Before the Subcommittee on Oversight and Investigations
From the Honorable Julia Carson
Ranking Democratic Member

Dr. Cohen:

1. In your testimony you mention existing partnerships with the Centers for Disease Control and the Agency for Healthcare Research and Quality. Various medical school assessments are "in the works," such as researchers from Johns Hopkins preparing clinicians for bioterrorism, and Cornell's Weill Medical College contingency planning efforts with the city of New York. What specific cooperative agreements are already in place with the VA?

Medical schools have maintained formal affiliation agreements with the VA since 1946. At present, over 120 VA medical centers have such agreements with 107 of the 125 allopathic medical schools. These agreements are beneficial to both parties. The VA gains access to medical school faculty members and the schools get expanded opportunities for both undergraduate and graduate medical education. Many medical school faculty also maintain productive joint appointments at the VA, enabling them to provide patient care and to conduct research. Indeed, many VA medical centers are located near, if not on, medical school campuses. Over the years, the VA-medical school affiliations have evolved to expand the scope, mission and responsibility of both partners.

As a formal communication mechanism, the AAMC sponsors a VA-Deans Liaison Committee, which comprises several medical school deans and the leadership of the Veterans Health Administration, including the Under Secretary and Deputy Under Secretary for Health, the Chief Academic Affiliations Officer and the Chief Network Officer. This group meets three or four times a year to discuss issues related to the affiliations, from intellectual property rights of inventions, to the VA CARES program, to new teaching documentation requirements. This committee provides both partners an open forum to discuss the issues facing the affiliation agreements and develop mutually beneficial solutions.

Additionally, the VA is an important partner in the AAMC's "First Contact, First Response" effort that was mentioned in my formal testimony. As this initiative goes forward, we look forward to the VA's continued input and participation in all aspects of the plan.

Congresswoman Carson to Dr. Martin J. Blaser, Professor and Chairman, Department of Medicine, NYU School of Medicine

Questions from the November 14th Hearing
Before the House Subcommittee on Oversight and Investigations
From the Honorable Julia Carson
Ranking Democratic Member

To: Martin J. Blaser, M.D.

1. When will the laboratory be up and running?

We already are conducting experiment in relation to anthrax, which is the most immediate threat. Current experiments are aimed at improving diagnostic tests, and exploring new forms of therapy. Mathematical modeling also is aimed at understanding the spread of the organisms. We can begin this work by using limited resources borrowed from other projects. However, for a full research agenda, we need permanent laboratory space and equipment, as well as a budget for supplies and personnel.

2. In your opinion, are more laboratories needed to fight bioterrorist attacks?

Yes, we could envision four to six laboratories devoted to these efforts. Areas of concentrations include infectious diseases, pulmonary diseases (including anthrax, smallpox, and plague) toxicology, pharmacology, as well as the development of educational programs.

3. What kind of research curriculum do you envision is needed to supplement a clinical track to fight bioterrorism?

As is widely appreciated, for anthrax we need better treatment (especially for inhalational anthrax), better diagnostic tests (for early detection of infection and initiation of therapy), and a better vaccine, that if necessary, can be given to a large number of people. Each of these topics is formidable, but represents a doable challenge.
Parallel studies are needed for smallpox, botulism, plague, and tularemia.
Improved antidotes are needed for cholinesterase inhibitors.

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November 30, 2001

Mr. Lane Evans
Ranking Member
Committee on Veterans Affairs
United States House of Representatives
335 Cannon House Office Building
Washington, DC 20515

Dear Congressman Evans,

Thank you for your interest in the VA/NYU Joint Center for Bioterrorism Research. I strongly believe that strategic collaborations between the VA health system and our nation's medical schools offer a way to address many of the gaps in our current ability to address the consequences of a bioterrorism-related event.

The VA/NYU Center is comprehensive in scope and contains a program of basic and translational biomedical research on the prevention and treatment of agents with potential as biowarfare weapons. Essential to that effort is a modern infrastructure in which bench research, animal studies and human clinical investigations can be performed safely, including at the BS-3 or -4 level. We hope to have the laboratory component of our center operational as soon as possible. As you can imagine, the events of September 11th have strained our resources to accomplish this task at a time when it is needed more than ever. If federal funding were available to support the lab, both the VA hospital and the NYU School of Medicine would be prepared to proceed immediately.

In my opinion, there should be approximately six regional laboratories established to work in conjunction with the federal government to prepare and respond to bioterrorism situations. These centers would complement the work of the Centers for Disease Control and Prevention as well as other federal agencies with established efforts in this area.

Funds must also be invested in sound research targeted towards those agents and diseases that may become agents in a bioterrorism attack. My own research on anthrax has been helpful in understanding symptoms and treating victims of the recent anthrax-related events, as well as developing new diagnostics. In addition, funding will be needed to train physicians, nurses, emergency medical personnel, and other public health professionals to both recognize and respond to a bioterrorist attack.

Thank you for your specific questions on this important subject, and I look forward to continuing to work with you and the Committee on this and other issues. I would enjoy the opportunity to meet with you when I am in Washington next to discuss the VA/NYU Center in greater detail.

Sincerely,

Martin J. Blaser, MD