AUTHENTICATED
U.S. GOVERNMENT
INFORMATION
GPO

S. Hrg. 110–451

LOCAL CHALLENGES OF GLOBAL PROPORTIONS: EVALUATING ROLES, PREPAREDNESS FOR, AND SURVEILLANCE OF PANDEMIC INFLUENZA

HEARINGS

BEFORE THE

OVERSIGHT OF GOVERNMENT MANAGEMENT, THE FEDERAL WORKFORCE, AND THE DISTRICT OF COLUMBIA SUBCOMMITTEE

OF THE

COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS UNITED STATES SENATE

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

SEPTEMBER 28, 2007

THE ROLE OF FEDERAL EXECUTIVE BOARDS IN PANDEMIC PREPAREDNESS

OCTOBER 2, 2007

PREPARING THE NATIONAL CAPITAL REGION FOR A PANDEMIC

OCTOBER 4, 2007

FORESTALLING THE COMING PANDEMIC: INFECTIOUS DISEASE SURVEILLANCE OVERSEAS

Available via http://www.access.gpo.gov/congress/senate

Printed for the use of the Committee on Homeland Security and Governmental Affairs

LOCAL CHALLENGES OF GLOBAL PROPORTIONS: EVALUATING ROLES, PREPAREDNESS FOR, AND SURVEILLANCE OF PANDEMIC INFLUENZA

S. Hrg. 110–451

LOCAL CHALLENGES OF GLOBAL PROPORTIONS: EVALUATING ROLES, PREPAREDNESS FOR, AND SURVEILLANCE OF PANDEMIC INFLUENZA

HEARINGS

BEFORE THE

OVERSIGHT OF GOVERNMENT MANAGEMENT, THE FEDERAL WORKFORCE, AND THE DISTRICT OF COLUMBIA SUBCOMMITTEE

OF THE

COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS UNITED STATES SENATE

ONE HUNDRED TENTH CONGRESS

FIRST SESSION

SEPTEMBER 28, 2007

THE ROLE OF FEDERAL EXECUTIVE BOARDS IN PANDEMIC PREPAREDNESS

OCTOBER 2, 2007

PREPARING THE NATIONAL CAPITAL REGION FOR A PANDEMIC

OCTOBER 4, 2007

FORESTALLING THE COMING PANDEMIC: INFECTIOUS DISEASE SURVEILLANCE OVERSEAS

Available via http://www.access.gpo.gov/congress/senate

Printed for the use of the Committee on Homeland Security and Governmental Affairs

U.S. GOVERNMENT PRINTING OFFICE

38–846 PDF WASHINGTON : 2008

For sale by the Superintendent of Documents, U.S. Government Printing Office
Internet: bookstore.gpo.gov Phone: toll free (866) 512–1800; DC area (202) 512–1800
Fax: (202) 512–2104 Mail: Stop IDCC, Washington, DC 20402–0001

COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS

JOSEPH I. LIEBERMAN, Connecticut, *Chairman*

CARL LEVIN, Michigan
DANIEL K. AKAKA, Hawaii
THOMAS R. CARPER, Delaware
MARK L. PRYOR, Arkansas
MARY L. LANDRIEU, Louisiana
BARACK OBAMA, Illinois
CLAIRE McCASKILL, Missouri
JON TESTER, Montana

SUSAN M. COLLINS, Maine
TED STEVENS, Alaska
GEORGE V. VOINOVICH, Ohio
NORM COLEMAN, Minnesota
TOM COBURN, Oklahoma
PETE V. DOMENICI, New Mexico
JOHN WARNER, Virginia
JOHN E. SUNUNU, New Hampshire

MICHAEL L. ALEXANDER, *Staff Director*
BRANDON L. MILHORN, *Minority Staff Director and Chief Counsel*
TRINA DRIESSNACK TYRER, *Chief Clerk*

OVERSIGHT OF GOVERNMENT MANAGEMENT, THE FEDERAL WORKFORCE, AND THE DISTRICT OF COLUMBIA SUBCOMMITTEE

DANIEL K. AKAKA, Hawaii, *Chairman*

CARL LEVIN, Michigan
THOMAS R. CARPER, Delaware
MARK L. PRYOR, Arkansas
MARY L. LANDRIEU, Louisiana

GEORGE V. VOINOVICH, Ohio
TED STEVENS, Alaska
TOM COBURN, Oklahoma
JOHN WARNER, Virginia

RICHARD J. KESSLER, *Staff Director*
LISA POWELL, *Chief Investigative Counsel*
JODI LIEBERMAN, *Professional Staf Member*
THOMAS RICHARDS, *Professional Staff Member*
JENNIFER A. HEMINGWAY, *Minority Staff Director*
THERESA MANTHRIPRAGADA, *Minority Professional Staff Member*
DAVID COLE, *Minority Professional Staff Member*
TARA BAIRD, *Minority Professional Staff Member*
THOMAS BISHOP, *Minority Legislative Aide*
JESSICA K. NAGASAKO, *Chief Clerk*

CONTENTS

Opening statements: Page
Senator Akaka 1, 25, 49
Senator Coburn 55
Prepared statement:
Senator Lieberman 79

WITNESSES

FRIDAY, SEPTEMBER 28, 2007

Bernice Steinhardt, Director, Strategy Issues, U.S. Government Accountability Office (GAO) 3
Kevin E. Mahoney, Associate Director, Human Capital Leadership and Merit System Accountability Division, Office of Personnel Management (OPM) 4
Art Cleaves, Regional Administrator, Region 1, Federal Emergency Management Agency (FEMA) 6
Ray Morris, Executive Director, Federal Executive Board of Minnesota 14
Kimberly Ainsworth, Executive Director, Greater Boston Federal Executive Board 16
Michael Goin, Executive Director, Cleveland Federal Executive Board 17

TUESDAY, OCTOBER 2, 2007

Kevin Yeskey, M.D., Deputy Assistant Secretary, and Director, Office of Preparedness and Emergency Operations, Office of the Assistant Secretary for Preparedness and Response, U.S. Department of Health and Human Services 28
Christopher T. Geldart, Director, Office of National Capital Region Coordination, U.S. Department of Homeland Security 30
Robert P. Mauskapf, Director, Emergency Operations, Logistics, and Planning in Emergency Preparedness and Response Program, Virginia Department of Health 32
Darrell L. Darnell, Director, District of Columbia Homeland Security and Emergency Management Agency 34

THURSDAY, OCTOBER 4, 2007

David Gootnick, Director, International Affairs and Trade, U.S. Government Accountability Office 52
Ray Arthur, Ph.D., Director, Global Disease Detection Operations Center, Centers for Disease Control and Prevention, U.S. Department of Health and Human Services 54
Kimothy Smith, D.V.M., Ph.D., Acting Director, National Biosurveillance Integration Center, Chief Scientist, Office of Health Affairs, U.S. Department of Homeland Security 56
Colonel Ralph L. Erickson, M.D., DrPH., Director, Department of Defense Global Emerging Infections Surveillance and Response System (DOD–GEIS), U.S. Department of Defense 57
Kent R. Hill, Ph.D., Assistant Administrator for Global Health, U.S. Agency for International Development 59
Nathan R. Flesness, Executive Director, International Species Information System (ISIS) 70
Daniel A. Janies, Ph.D., Assistant Professor, Department of Biomedical Informatics, Ohio State University Medical Center 73
James M. Wilson V, M.D., Director, Division of Integrated Biodefense, Imaging Science and Information Systems (ISIS) Center, Georgetown University 74

Page

Alphabetical List of Witnesses

Ainsworth, Kimberly:
Testimony 16
Prepared statement with attachments 109
Arthur, Ray, Ph.D.:
Testimony 54
Prepared statement 203
Cleaves, Art:
Testimony 6
Prepared statement 98
Darnell, Darrell L.:
Testimony 34
Prepared statement 176
Erickson, Colonel Ralph L., M.D., DrPH.:
Testimony 57
Prepared statement 228
Flesness, Nathan R.:
Testimony 70
Prepared statement 246
Geldart, Christopher T.:
Testimony 30
Prepared statement 160
Goin, Michael:
Testimony 17
Prepared statement with attachments 142
Gootnick, David:
Testimony 52
Prepared statement 184
Hill, Kent R., Ph.D.,:
Testimony 59
Prepared statement 238
Janies, Daniel A., Ph.D.:
Testimony 73
Prepared statement 252
Mahoney, Kevin E.:
Testimony 4
Prepared statement 94
Mauskapf, Robert P.:
Testimony 32
Prepared statement 166
Morris, Ray:
Testimony 14
Prepared statement 105
Smith, Kimothy, D.V.M., Ph.D.:
Testimony 56
Prepared statement 220
Steinhardt, Bernice:
Testimony 3
Prepared statement 80
Wilson, James M. V, M.D.:
Testimony 74
Prepared statement 254
Yeskey, Kevin, M.D.:
Testimony 28
Prepared statement 150

APPENDIX

Background for September 28, 2007 hearing 261
Background for Octoober 2, 2007 hearing 267
Background for October 4, 2007 hearing 274
Issac Ajit, M.D., M.P.H., Acting Deputy Director of the Office of Preparedness and Response, Maryland Department of Health and Mental Hygiene, State of Maryland, October 2, 2007, prepared statement 282

Page

Responses to questions submitted for the October 4, 2007 Record from:
Mr. Gootnick 290
Mr. Arthur 293
Mr. Smith 306
Colonel Erickson 316
Mr. Hill 322
Mr. Flesness 350
Dr. Wilson 356
Charts submitted for the Record for the October 4, 2007 hearing by Ray Arthur 359
Additional Post-Hearing questions submitted for the October 2, 2007 Record from Dr. Yeskey 363
GAO Report entitled "The Federal Workforce, Additional Steps Needed to Take Advantage of Federal Executive Boards' Ability to Contribute to Emergency Operation," dated May 2007, GAO–07–515, submitted by Bernice Steinhardt 367

THE ROLE OF FEDERAL EXECUTIVE BOARDS IN PANDEMIC PREPAREDNESS

FRIDAY, SEPTEMBER 28, 2007

U.S. SENATE,
SUBCOMMITTEE ON OVERSIGHT OF GOVERNMENT
MANAGEMENT, THE FEDERAL WORKFORCE,
AND THE DISTRICT OF COLUMBIA,
OF THE COMMITTEE ON HOMELAND SECURITY
AND GOVERNMENTAL AFFAIRS,
Washington, DC.

The Subcommittee met, pursuant to notice, at 10:03 a.m., in Room SD–342, Dirksen Senate Office Building, Hon. Daniel K. Akaka, Chairman of the Subcommittee, presiding.

Present: Senator Akaka.

OPENING STATEMENT OF SENATOR AKAKA

Senator AKAKA. This hearing will come to order.

I would like to thank you all for joining us for this hearing on the role of Federal Executive Boards in the preparation and continuity of operations in the event of a pandemic influenza outbreak or other emergency.

Although we spend billions of dollars preparing the National Capital Region—the heart of our Federal Government—for emergencies, outbreaks, and potential terrorist attacks, more than 85 percent of the Federal workforce is employed outside of the Washington, DC area. Next week, we will hear about pandemic preparedness in the NCR and the global surveillance of tracking infectious diseases.

Today, we begin to look at the preparation of the Federal workforce outside the Nation's capital and the support that FEBs can offer those communities.

President Kennedy issued a directive in 1961 to create FEBs and allow the heads of Federal agencies in 10 regions around the country to come together to address human capital and emergency issues in those Federal communities. There are now, can you believe it, 28 boards in 20 States, including Hawaii.

We invited the Executive Director of the Honolulu-Pacific Federal Executive Board, Ms. Gloria Uyehara, to be present and to give her testimony today, but regretfully she was unable to make the long trip.

FEBs are a quasi agency with no institutionalized structure and no dedicated source of funding. OPM oversees the FEBs, but the staff is usually employed by a local agency detailee. They do not receive specific appropriated funds. Some have an executive direc-

tor, some have no permanent staff at all. Each one of the 28 FEBs seems to have its own funding and operating structure.

A Government Accountability Office report concluded in the year 2004 that Federal Executive Boards could play a greater role in the coordination of emergency preparedness and response. Their latest report released in May of this year reaches the same conclusion with a particular focus on pandemic influenza preparedness.

GAO recommends the development of a strategic plan for FEBs to support emergency operations, including dedicated funding and performance measurements. I understand that OPM has been working on a strategic plan and consulting with the Federal Emergency Management Agency. I look forward to hearing more about these efforts.

Public health experts at the World Health Organization (WHO) believe that the world is due for a pandemic influenza outbreak. In the past 100 years, pandemic influenza has killed 43 million people around the world. Most recently, the Hong Kong flu killed 2 million people in 1968. The Centers for Disease Control and Prevention estimate that a flu pandemic could kill between 2 million and 7.4 million people worldwide.

Today, the threat of the avian influenza, or the H5N1 virus, continues to rise. WHO reports that there have been 328 cases of infections in humans from South East Asia across the continent into Africa and the edges of Europe since 2003. Of those cases, 200 humans have died. While most cases of human infection of avian influenza are through contact with live poultry, in late August a group of doctors confirmed for the first time the spread of the H5N1 virus from human to human in Indonesia.

There are treatments available, but there are also distinct challenges to emergency response for pandemic outbreak. Unlike one-time disasters, pandemics can last for an extended period of time, come in waves, and infect populations across a broad geographic area. They require the coordination of emergency response teams with health officials and community groups. Even more difficult, they can bring up sensitive issues of social distancing and treatment prioritization.

I do not think that we will be able to address all of these issues at this hearing. I do, however, expect that our witnesses will shed light on a few fundamental questions. Should FEBs play a role in responding to a single emergency event or pandemic influenza outbreak? And if so, what is their capacity to play a significant role?

From what I know about this organization, I think that group can really make a difference.

I look forward to hearing from our witnesses on the establishment of emergency response, continuity of operations, and pandemic preparedness and response plans in relation to Federal Executive Boards.

So I want to say welcome again to our panel and to introduce Bernice Steinhardt, Director of Strategic Issues, Government Accountability Office; Kevin Mahoney, Associate Director, Human Capital Leadership and Merit System Accountability, Office of Personnel Management; and Art Cleaves, Region 1 Administrator, Federal Emergency Management Agency.

Our Subcommittee rules require that all witnesses testify under oath. Therefore, I ask all of our witnesses to stand and raise your right hand and take this oath.

Do you solemnly swear that the testimony you are about to give this Subcommittee will be the truth, the whole truth, and nothing but the truth, so help you, God?

Ms. STEINHARDT. I do.

Mr. MAHONEY. I do.

Mr. CLEAVES. I do.

Senator AKAKA. Let it be noted for the record that the witnesses answered in the affirmative

Welcome again, and before we begin, I want all of you to know that although your oral statement is limited to 5 minutes, your full written statements will be included in the record. So Ms. Steinhardt, will you please proceed with your statement?

TESTIMONY OF BERNICE STEINHARDT,[1] DIRECTOR STRATEGIC ISSUES, GOVERNMENT ACCOUNTABILITY OFFICE

Ms. STEINHARDT. Thank you very much, Mr. Chairman. We appreciate the opportunity to be here today to talk about the results of our review of Federal Executive Boards (FEBs) and their ability to contribute to the Nation's efforts to prepare for a potential flu pandemic.

The FEBs, as you pointed out, are unique entities in the Federal Government. Many of the challenges the country faces, and particularly those having to do with homeland security and emergency preparedness, can only be addressed through the collaborative efforts of networks of organizations working horizontally, across many Federal agencies, as well as among State and local governments and the private and nonprofit sectors. The FEBs are this kind of network.

They operate in 28 cities and States, and consequently are uniquely positioned to improve the coordination of emergency preparedness efforts outside of Washington, DC, which, as you pointed out, is where the vast majority of Federal employees work.

Given the nature of a pandemic flu, this capability could be particularly valuable. Because a pandemic flu is likely to last for months and will occur in many parts of the country at the same time, the center of gravity of the pandemic response will be in communities. As a result, planning for a pandemic will have to be integrated across all levels of government and the private sector as well, and it will have to be sustained over a long time.

Let me turn now to some of the findings of our study. At the time of our review, all 14 Boards in our study were engaged in some type of emergency planning. All of them had an emergency communications network, an emergency preparedness council in place, and all of them had some degree of involvement with State and local officials in their emergency activities. Many of them, were also playing an active role in pandemic planning from sponsoring briefings to coordinating pandemic exercises involving numerous government and nongovernment organizations.

[1] The prepared statement of Mr. Steinhardt appears in the Appendix on page 80.

Even looking ahead to a possible response role for them during a pandemic, FEBs have the potential to broaden the situational awareness of their member agencies and to provide a forum to inform their decisions, much like what they now do during inclement weather conditions.

But the FEBs face a number of challenges in trying to live up to this potential. First, the Boards are not included in any national emergency plans, which means that their value in emergency support is often overlooked by Federal agencies who are unfamiliar with their capabilities. By including the Boards in emergency management plans, the role of the FEBs and their contribution in emergencies involving the Federal workforce could be much better communicated.

Second, it will be difficult to provide consistent levels of emergency support services across the country given the variations in the capabilities of the FEBs. The Boards, as you pointed out, have no Congressional charter, and receive no Congressional appropriation. Instead they rely on voluntary contributions from their member agencies, including staff, which are typically just an executive director and an assistant. As a result, funding for the FEBs has been inconsistent which, in turn, creates uncertainty for the Boards in planning and committing to provide emergency support services. In fact, some Federal agencies that have voluntarily funded FEB positions in the past have begun to withdraw their funding support.

Our report outlines several actions to address these challenges. First, we recommended that OPM work with FEMA and the Department of Homeland Security to formally define the FEB role in emergency planning and response. We also recommended that OPM, as part of its strategic planning efforts, develop a proposal for an alternative to the current voluntary contribution mechanism that would address the uncertainty of funding for the Boards.

In closing, Mr. Chairman, I want to underscore that the FEBs today offer us a potentially—and I want to underline potentially—important mechanism to support pandemic planning and the Federal workforce. That potential still remains to be realized in many cases where the Boards' capacity still needs to be developed.

On the other hand, for an event like a pandemic flu, FEBs are tailor-made for working across agency and government lines. As one FEMA official told us, if they did not exist, we would have to create them. With that, I will conclude my statement and be happy to answer any questions. Thank you.

Senator AKAKA. Thank you very much for your statement. Mr. Mahoney.

TESTIMONY OF KEVIN E. MAHONEY,[1] ASSOCIATE DIRECTOR, HUMAN CAPITAL LEADERSHIP AND MERIT SYSTEM ACCOUNTABILITY DIVISION, OFFICE OF PERSONNEL MANAGEMENT

Mr. MAHONEY. Good morning, Mr. Chairman, I am pleased to be here on behalf of our Director, Linda Springer, to discuss the role of the Federal Executive Boards and how they can assist with pan-

[1] The prepared statement of Mr. Mahoney appears in the Appendix on page 94.

demic preparedness and other Federal emergency planning and response efforts.

We appreciate that this Subcommittee has recognized the value of these Bards and we share your commitment to increasing their effectiveness.

As you mentioned, the Presidential Directive established the Boards, and the Boards were directed to work on interagency regional cooperation and to establish liaison with State and local governments. The contribution these Boards can make towards emergency preparedness and assistance for Federal employees and their families and for all Americans have become more evident as a result of the terrorist attacks of September 11, 2001 and Hurricane Katrina in 2005. The National Strategy for Pandemic Influenza, issued by President Bush in 2005, also provides opportunities for Federal Executive Boards to play a critical role, which I will discuss further in my testimony.

In close collaboration with the Chairs and the Executive Directors of the Federal Executive Boards, OPM has established two primary lines of business: Emergency preparedness, security and employee safety; and human capital preparedness. In addition to these lines of business, the Boards are also expected to focus on establishing communication channels that can help build understanding and teamwork among Federal agencies in the field. The experiences of September 11, 2001 and Hurricane Katrina have demonstrated these relationships need to be in place before an emergency occurs.

While the Federal Government received criticism for its response to Hurricane Katrina, there were many successes that have not yet received the same level of attention. In particular, I wanted to acknowledge today the key role that was played by the New Orleans Federal Executive Board and its Executive Director, Kathy Barre, and just underscore some of the things they did. The Board coordinated with OPM and FEMA to collect information, and communicated issues of concern regarding the Federal workforce from Federal agencies at the local level.

The Board also facilitated sharing of Federal workforce information to and from Washington by organizing teleconferences with FEMA and OPM and other agencies.

Finally, the Board helped to identify both the needs and the status of local Federal workers and their families to make sure that they were part of FEMA's response activities.

Two more recent events have really brought home the importance of these Boards and the relationships and communication channels they bring to the table at the Federal/regional level during emergencies. The first is the most recent Minnesota bridge collapse, and you will hear more from Ray Morris later today about that event. The second was an event of tuberculosis with a HUD employee in New York City. In both of these cases, the Board, through its relationships with State, local, and Federal agencies, was able to gather information, communicate information, and assure the safety of Federal employees. Quick action, especially in New York, alleviated many employee concerns about tuberculosis and how tuberculosis can sometimes be spread.

Director Springer and all of us at OPM take very seriously the direction that President Bush has assigned to our agency with respect to pandemic preparedness. To help departments and agencies mitigate the effects of a pandemic event, OPM has developed human resource policies and mechanics to assure safety of the Federal workforce and continuity of Federal operations. We have provided agencies with training, information for their human resources, and emergency preparedness personnel. We have also conducted town hall meetings with the Department of Health and Human Services to educate Federal employees on pandemic preparedness.

Mr. Chairman, the recent report you requested from the Government Accountability Office concerning Federal Executive Boards and their emergency operations role acknowledges much of what I have described in my statement. The report also makes four recommendations that I would like to address briefly.

First, GAO recommended that OPM work with FEMA to develop a memorandum of understanding that formally defines the role of the FEBs in emergency planning and response. My staff has met with FEMA and later in October, I will also meet with Dennis Schrader, who is the Deputy Administrator at FEMA, to finalize an MOU. We have made good progress in that area.

Second, GAO recommended that OPM initiate discussions with Homeland Security and other stakeholders. We have met with the White House Homeland Security Council staff and we are integrating the Federal Boards into planning.

In conclusion, Mr. Chairman, I would like to say that OPM is proud of the accomplishments of the Federal Executive Boards, especially with planning and response to emergency situations, where lives are at stake and government services are critical. We will continue to work with the Boards and agencies to better prepare the Federal workforce at the regional level for a possible pandemic influenza or other emergency event.

I am happy to answer any of your questions. Thank you.

Senator AKAKA. Thank you very much, Mr. Mahoney. And now, Mr. Cleaves, please proceed with your testimony.

TESTIMONY OF ART CLEAVES,[1] REGIONAL ADMINISTRATOR, REGION 1, FEDERAL EMERGENCY MANAGEMENT AGENCY

Mr. CLEAVES. Mr. Chairman, thank you very much for inviting me to appear before your Subcommittee today and highlight our activities with Greater Boston Federal Executive Board and to underscore our strong working relationship.

Mr. Paulison laid out a vision for a new FEMA that integrates and incorporates missions assigned to FEMA by the Post-Katrina Emergency Management Reform Act of 2006. An important part of that vision is an enhanced role in regional preparedness to include the Federal Executive Boards.

In the new FEMA, preparedness activities will be integrated into a regional focus designed to serve the needs for States and local communities. FEMA regions will become networking organizations, instrumental in the development of a seamless connection with all

[1] The prepared statement of Mr. Cleaves appears in the Appendix on page 98.

of our partners, Federal, State, tribal, local, homeland security advisors, emergency management directors, and the private sector, as well. This is going to result in a full preparedness strategy carrying awareness through the State to the individual communities. This awareness will become embedded through training and exercising from a local level to the Federal level.

Our approach and preparedness is all hazard approach, including terrorist events, other manmade events, natural disasters and, of course, including a pandemic.

The Federal Executive Boards and FEMA share a common role as coordinating elements. The Federal Executive Boards are a critical part of preparedness in response, recovery, mitigation, and in particular continuity of operations and continuity of government.

The Greater Boston Federal Executive Board is an integral part of our preparedness and our preparedness strategic planning. Their proven ability to effectively coordinate with all Federal organizations makes the FEB a key factor in preparing for a potential pandemic.

Because of New England's compact geographical size, we maintain a very close working relationship with the States and also the Federal organizations. And maintaining this relationship is greatly facilitated by the effectiveness of the Executive Director of the Greater Boston Federal Executive Board, Kim Ainsworth, and she will be testifying on the second panel today.

FEMA Region 1 is going to be coordinating a regionwide pandemic exercise during the next quarter. This is the first exercise of this size, scope or magnitude in New England. The goal is to bring Federal/State partners together to review the issues that present themselves and to better understand the roles and responsibilities of government during any pandemic. The Federal Executive Boards play an important role in pandemic preparedness, acting as a coordinating agency for the Federal departments who will have the lead in the pandemic outbreak. These departments include Department of Health and Human Services, as well as the Centers for Disease Control. Those are key components during this response element. But because of the nature of a pandemic and its potential to affect large populations, the FEBs' ability to coordinate with all the Federal agencies in a timely manner is essential.

The FEB and its relationship building capability can be a key resource in the event of a pandemic. Let me underscore just a couple very quickly, of coordination elements that they can do. I mentioned the coordination between agencies when social distance is required, and that is all agencies in the Federal Government.

The FEB is also a conduit for resource support during any response operation. And the nature of a pandemic will severely reduce the workforce. The greatest concern of government, and in private sector as well, is the numbers of personnel. The FEB is postured to reach all Federal agencies, and give us additional response personnel that we might need in the response phase of a pandemic.

The FEB can and should play a major role in pandemic preparedness and response. By pre-identifying unique capabilities that exist within the FEB and by establishing roles and responsibilities it will undertake during a pandemic that FEB can engage from the

outset to enhance response effort and integrate all Federal agencies.

The FEB has also been engaged in the area of continuity of operations and continuity of government in Region 1 by assisting coordination of training between all member agencies. As I previously indicated to you, we are planning a major pandemic influenza exercise in the Region in December. This exercise is going to solicit active participation from all the Federal agencies and the Greater Boston Federal Executive Board will again play an integral role in part of that coordination.

This exercise is going to provide an opportunity for all of the Federal agencies to gain a more accurate picture of their continuity of operations and their continuity of government posture. Overall, we can see very quickly that the Federal Executive Boards are an integral part of the fabric of the new FEMA.

In conclusion, I would like to thank you again for the opportunity to give you this testimony today and I look forward to any questions. Thank you.

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

I want to thank all of you for your testimony. I must tell you that I am delighted to hear what you have said here.

The GAO report says that FEBs can be a valuable asset because of its informal relationships—highlights the importance of informal relationships with governmental and nonprofit partners. GAO recommended that FEBs' role be formalized. So what I am interested in, what are your thoughts in the recommendation by the GAO that FEBs' role be formalized? Ms. Steinhardt.

Ms. STEINHARDT. Well, it is wonderful that the FEBs have these relationships with other organizations at other levels of government now and have taken, in some cases, an active role in working with them on emergency preparedness activities. But it is not enough to do this on an informal basis. Some of the people we talked to were not familiar with the fact that they had a role to play and so they are an underutilized resource in some instances.

But beyond that, it is important in an emergency response for everyone to understand what role they are going to play in advance of the emergency. Certainly, we learned this lesson in Hurricane Katrina and other national disasters. Those roles have to be clearly identified beforehand. And so it is important, if FEBs are going to play a role in planning and preparedness and response, that they be formally identified.

Senator AKAKA. So your thoughts are that you are on the side of formalizing that?

Ms. STEINHARDT. Absolutely. For that reason we recommended that there be some formal agreement between OPM and FEMA to formalize that role and to explore the possibility of including the FEBs actually in the National Response Plan or other national plans.

Senator AKAKA. Thank you. Mr. Mahoney.

Mr. MAHONEY. We agree. The role of the FEBs is critical to any response to an emergency that might occur and that their role should be formalized. As I mentioned earlier, we are and have been meeting with FEMA to establish an MOU that would formalize the FEBs role and any response to an event. In addition, through the

creation of our strategic plan with the FEBs, we are moving in a direction where the FEBs will focus, hopefully, about 50 percent of their time on emergency preparedness.

We are taking steps through both our own work with the FEBs as well as our work with FEMA to formalize a role for the FEB in any emergency event.

Therefore, we do agree with GAO that there should be a process in place that identifies the role of the FEB.

Senator AKAKA. Thank you. Mr. Cleaves.

Mr. CLEAVES. Mr. Chairman, I could not agree more thoroughly with that.

Mr. Mahoney mentioned that the MOU is now being formulated between FEMA and the FEBs, and that will be a critical part both in the preparedness area and in a response phase, as well. If all organizations understand those roles and responsibilities, we can multiply the horsepower and get that much more preparedness done and understand roles and response and recovery. It is really part of the national response framework, as well.

So we could not agree more.

Senator AKAKA. Is there a chance that the informal relationships could be threatened by formalizing those relationships? Ms. Steinhardt.

Ms. STEINHARDT. I do not think so. I think the informal relationships, the relationships among people, are vital. That is where the relationships occur. But I think it is equally important for those relationships to be understood and formalized so that people are very clear about what they are expected to do, both in advance of a national emergency or a local emergency as well as during an emergency. Having clear expectations is critical.

Senator AKAKA. Mr. Mahoney.

Mr. MAHONEY. Mr. Chairman, I do not think you can underscore enough the importance of the informal relationships that exist at the local level. I had a first-hand glimpse of this in August when the Minnesota bridge collapsed and Ray Morris, who was in Washington at the time, attending our annual FEB conference, was able to communicate with contacts at the State, local, and national levels. I am sure he will talk more about that in his testimony.

It was an opportunity for me to watch how these informal networks can come together so quickly because people already know each other. They do not have to, at the site of an emergency, introduce each other and get to know who does what, it has already been established.

The formalizing process, I think, just makes it easier for everybody in Washington to understand how to communicate with the FEBs and what channels to use so that the informal process really then begins to take shape at the site level.

I agree with Ms. Steinhardt, I do not see any danger in formalizing this.

Senator AKAKA. Mr. Cleaves.

Mr. CLEAVES. I also agree with that. I think formalizing it, again, will multiply the efforts.

So many times in an informal relationship there is a crossover, there is a duplication of effort. When you formalize it then, in fact,

you will get more effort accomplished in the end, a much better way to do it.

Senator AKAKA. Mr. Cleaves, are there similar organizations to FEBs in the State, local, or private sector that play a formal or informal role in responding to an emergency or pandemic outbreak?

Mr. CLEAVES. Yes, Mr. Chairman. The first one that comes to mind is the volunteer organizations active during disasters, all volunteer groups that come forward. So there are many organizations that respond during that phase.

One of the things that I captured in my notes here is that training and exercise and then, in fact, I could tell you, in our case, the Federal Executive Board in the Greater Boston area is an integral part of what we do. It is an organization that can reach all of the Federal agencies, not just the major responders, but all organizations. So it is a critical piece of what we do. But there are many organizations that we try to have memorandums of understanding with so again it is not a duplication of effort but a better, broader preparedness effort.

Senator AKAKA. Ms. Steinhardt, a pandemic outbreak could last a long time.

Ms. STEINHARDT. Right.

Senator AKAKA. Come in waves, as I said, and happen over a broad geographic region, which would make continuity of operations planning especially challenging. What strengths do FEBs have for dealing with emergency response for an event unfolding over an extended time and over a geographic area?

Ms. STEINHARDT. That is an excellent question. One of the strengths of the FEBs is that they have an established network of Federal officials in their location. Because a pandemic, as I said in my statement, will last for a long time and occur all over the country, unlike other kinds of disasters where the Federal Government can mobilize a lot of resources to a single location, communities are going to have to deal with a pandemic flu largely on their own. They are going to have to do—as you say, they are going to do it over an extended period of time. So it is going to involve a sustained level of leadership.

And because FEBs are in those communities, because they have established relationships, because they represent the largest Federal agencies, they can bring that kind of sustained leadership over an extended period of time.

Senator AKAKA. OPM is in the process of developing a national strategic plan for FEBs with input from FEMA. For some FEBs the guidance will be welcome direction, and for others it could read outside the scope of their capacity. Given the differences among FEBs around the country, how are you ensuring that strategic plans reflect the capacity of each FEB? Mr. Mahoney.

Mr. MAHONEY. Mr. Chairman, in OPM's review of the FEBs one of the things we are looking at is the question of whether FEBs are staffed appropriately by the size of the population they serve, which I think gets to the heart of your question. We have not reached any firm conclusions yet. Most FEBs operate on a model with an Executive Director and an Assistant. We are not sure if that model holds for an area like Los Angeles, which has a large population.

We are in the process of evaluating what level of staffing is appropriate.

As you know, the Board itself comprises the most senior persons in agencies located within the FEB's geographical area, and therefore Board size varies. But, the support of the Board is critical, and I think as we move further into emergency preparedness, roles having the FEB properly staffed to carry out those functions is going to be an important issue on which OPM should work.

Senator AKAKA. Mr. Cleaves.

Mr. CLEAVES. We are involving the Greater Boston Federal Executive Board in our strategic planning starting this year. And I do not think in the past we have done it as thoroughly and deeply as we are attending to this year. We have already a very strong working relationship. But we are going to involve them early in the preparedness portions, the planning portions, and then intricately in the exercises.

As I mentioned, for those Federal organizations that do not normally respond to a major event, there are all the other agencies that will need that coordination. That is a big role for the Federal Executive Board to take on.

We have also made working space in our Boston office for Ms. Ainsworth so she can become a closer part of knowing what we do on a day-to-day basis. So that is going to be a more integral working relationship than there has been before.

Ms. STEINHARDT. Mr. Chairman, if I can add to Mr. Mahoney's comments particularly, one of the issues we touched on in our report dealing with capability of the FEBs and their varied capability had to do with performance expectations for the executive directors. Currently, they are employees of a host agency in each of the regions. In some instances their performances expectations and their performance is assessed by that host agency. In some cases, it is by the chair of the Federal Executive Board. In some cases, OPM plays a part in fact, and in some cases it does not.

And so one of our recommendations was for OPM to develop a more consistent set of performance expectations for the executive directors. We think that will help a lot.

Senator AKAKA. This question will be for OPM. When can we expect to see the strategic plan? And how are you incorporating GAO's recommendation?

Mr. MAHONEY. Well, to add to Ms. Steinhardt's comments, we very much agreed that there should be a common set of performance metrics for the FEBs. Earlier in your comments, you mentioned the funding issue. We think it is important, as we ask agencies to fund the FEBs, to be able to demonstrate what the FEBs will accomplish. Therefore, part of our review in the strategic plan is to work with the Executive directors and the Board chairs to develop a set of performance metrics on which we can all agree.

We think, with relationship to the strategic plan, we should have something finalized this coming winter. We have been working on it. As you know, there are 28 separate locations and communication and coordination take a little time. We think by this winter we should have a finalized strategic plan.

Senator AKAKA. Mr. Mahoney, it is my understanding that in the event of a pandemic outbreak local health departments may not

have the capacity to treat the critical personnel at Federal agencies that must be at work. Some Federal agencies are already identifying critical personnel and stockpiling medication. Have you begun to look at how agencies are handling this issue in the field? And how can FEBs help in this effort?

Mr. MAHONEY. Mr. Chairman, in a number of cities the FEBs are working with State and local authorities to identify the appropriate distribution of vaccines in the event of an emergency and I guess the appropriate order in which vaccines should be delivered. Some of this work is still in the early stages, but we are encouraging all of the FEBs to get more involved in this particular process because we see it as key not only for the Federal population, but also for the people locally in those areas. We are working toward a program with respect to vaccine distribution.

Senator AKAKA. Mr. Cleaves, the testimony presented today shows some of the ways that FEBs can support the overall response efforts in the event of a pandemic and other emergency. What do you see as the realistic responsibilities that should be given to FEBs in the event of an emergency or pandemic?

Mr. CLEAVES. I think the two areas that I mentioned earlier is the coordination that they provide. We have got a proven track record in the Greater Boston area of Ms. Ainsworth being able to coordinate with all of the Federal agencies very effectively during a pandemic. There is going to be a very reduced workforce so it is going to be critical for that.

The second one I mentioned in the testimony is the ability for the FEB to identify additional workers in that response phase. We have a very deliberate and defined action that we take, whether it is a hurricane coming into the region or whether it is a pandemic, that we move our response coordination center out in Maynard, Massachusetts. The FEB can communicate with all Federal agencies what our strategy will be and then also what their response objectives can be during a pandemic.

Senator AKAKA. Mr. Mahoney and Ms. Steinhardt, FEBs do not conduct performance reviews, provide pay adjustments, or provide bonuses to participants. Their employing agencies do that. This presents challenges for establishing performance measures. When talking about establishing performance standards for FEBs, how do you recommend establishing them? And who should be responsible for evaluating them? And whose performance should be measured?

Ms. Steinhardt.

Ms. STEINHARDT. An excellent question and one that is, I think, very important. We recommended that this be part of the strategic planning effort that is now underway, OPM working with the Federal Executive Boards. To the extent that OPM is setting expectations for the FEBs for human capital, in the area of human capital management and in emergency preparedness, then OPM needs to be involved in setting those standards so that there is some consistency across the country.

At the same time though, it is important to recognize that one of the strengths of the FEBs is the fact that they are local, that they are responsive to their local conditions, to their regional perspective. So there needs to be some collaborative effort, I think, be-

tween OPM and the FEBs and the members of the FEB on what those standards should be.

Senator AKAKA. Mr. Mahoney.

Mr. MAHONEY. As I said earlier, we are in the process of working on a common set of performance measures. It is problematic that the FEB directors report to a variety of different agencies. But I think the common denominator is that all of those agencies are interested in employee security and human capital readiness.

As we go about looking at how to develop agreed-upon standards, I think we will work very closely with the agencies that support the FEBs and get their buy-in on a set of plans that both support the FEBs and support their own agency needs with respect to employee security and human capital readiness.

Senator AKAKA. As I mentioned here, I was asking your thoughts on any recommendations on how to establish this and also who should be evaluating. Of course, OPM being the personnel, could be. The other question was who should you measure? But this is something that we need to really think about.

Mr. Mahoney, OPM has oversight of the operations of FEB. But most FEB operations are directed by the FEB chairman and the executive director. All participation by agency heads is voluntary. That is the setup. If we place greater emphasis on FEBs in participating in emergency response plans, who ultimately would be accountable for their efforts?

Mr. MAHONEY. Mr. Chairman, we do have oversight over the FEBs and we have established, as I mentioned, these two lines of businesses because we feel that they are most important in the ongoing collaboration and coordination in Federal agencies outside of Washington, DC. We take very seriously our role in overseeing how this is accomplished.

As we have discussed here this morning, this is a very localized organization which has a national responsibility. We have to continue to work with the local agencies as well as setting standards we think the agencies need to live up to. Ultimately, each agency has to evaluate how their FEBs are performing. OPM plans to have a significant role in that discussion.

Senator AKAKA. I want to thank you all for your responses. It is very evident that coordination, collaboration, working together, trying to keep it as a formalized organization informally. And so this is a challenge. I am glad that you are thinking about this and we look forward to us continuing to work on this because finally the mission is to deliver in emergencies. And unless, as you mentioned, we plan beforehand we will not do as well.

I would tell you after 20 hearings on Hurricane Katrina we have learned a lot and so much has to be done. I tell you one of the problems with Hurricane Katrina that many people, I think, miss what I caught in the 20 hearings was personnel, and that there were positions that were vacant. So therefore, it could not be carried forward.

So all of these need to be part of the strategic planning for the future.

I appreciate your thoughts on this and was glad, as I said at the beginning, to what you have said about bringing it together and the importance of working from the regional level all the way up

through the agencies. But we have to communicate and take all advantage of communicating. And also, the other part to that as we are working here is that we need to make good use of our information technology. That technology is building fast and we need to use it well.

So again, thank you so much for your responses and I really appreciate it.

Let me call panel two forward. The witnesses are Ray Morris, Executive Director of the Federal Executive Board of Minnesota; Kimberly Ainsworth, Executive Director of the Greater Boston Federal Executive Board; and Michael Goin, Executive Director of the Cleveland Federal Executive Board.

Our Subcommittee rules, as I mentioned earlier, require that all witnesses testify under oath. Therefore, I ask all of the witnesses to please rise and raise your right hand.

Do you solemnly swear that the testimony you are about to give this Subcommittee is the truth, the whole truth, and nothing but the truth, so help you, God?

Mr. MORRIS. I do.

Ms. AINSWORTH. I do.

Mr. GOIN. I do.

Senator AKAKA. Let it be noted for the record that the witnesses answered in the affirmative

Again, I want to welcome you to this Subcommittee. As a reminder, your oral statements are limited to 5 minutes but your full written statements will be included in the record. So Mr. Morris, will you please proceed with your statement.

TESTIMONY OF RAY MORRIS,[1] EXECUTIVE DIRECTOR, FEDERAL EXECUTIVE BOARD OF MINNESOTA

Mr. MORRIS. Good morning, Mr. Chairman. I am Ray Morris, Executive Director of the Minnesota Federal Executive Board.

As a FEB director, I am responsible for the coordination of over 120 Federal Government agencies within Minnesota and intergovernmental relations with State and local government.

There is a great need among FEB directors to have our current work and function reflected in Federal emergency planning documents like the National Response Framework. This action will enhance our effectiveness and credibility for the work that we are doing with Federal, State and local government agencies. We fill a niche that the FBI, FEMA, and the military do not focus on, the Federal workforce in field areas.

Established in 1961, FEBs had our roots in the cold wars, ensuring the continuity of government in the field, a duty that is perhaps more important in today's threat environment.

An example of our work in communicating crisis information is as recent as last month. August brought Minnesota two federally declared disasters, one natural and one manmade. The intergovernmental response to the sudden collapse of the eight lane I–35 W bridge in Minneapolis showed the Nation the excellent level of preparedness that exists within our State. Although 13 lives were lost,

[1] The prepared statement of Mr. Morris appears in the Appendix on page 105.

over 108 people survived the over 60 foot fall to the river due to the heroic efforts of all levels of government personnel.

Another disaster struck Minnesota 17 days later as up to 20 inches of rain fell across seven counties in Southeast Minnesota causing massive flooding resulting in seven fatalities and $67 million in damage.

During both of these events, our FEB acted swiftly, passing critical information from local and State government sources to all Federal agencies on the recovery operations, road detours, and other potential workforce impacts.

The response to these disasters by all levels of government in the State was exemplary and was due to one vital element: Trust through previous friendships. No business cards were exchanged during any of these disasters among the responders. FEB Minnesota has worked hard over the past 10 years, serving as a catalyst in the Federal sector, to establish and maintain these relationships with State and local government who are our first responders.

We have helped many of our State and local partners through our educational activities. Since 2001 our Federal Executive Board has sponsored five tabletop exercises that are open to all levels of government. In the past year we held two of these. Pan Flu II, that had close assistance from the Minnesota Department of Health and the Minnesota Division of Homeland Security and Emergency Management.

The most recent that we held was Going to Red, that explored the national threat of nuclear terrorism, culminating with a 10 kiloton improvised nuclear device detonated outside the capital city of Saint Paul.

During the past 6 years, we presented 20 half or full day seminars with expert speakers on the hot topics of the day. And since 2005 we have worked very extensively with officials at the State Department of Health on a program to cover Federal workers, critical Federal workers in the event of a pandemic or a bioterrorism release so that they could continue their crucial duties without interruption.

Three elements come together to make our FEB strong and effective. The first is an active executive committee, comprised of 33 senior Federal officials. The second is a great intern program with over a dozen colleges and universities. And the final part of the equation in making our FEB strong and effective as financial and administrative support by a key Federal agency, the Department of the Interior, through the National Business Center in the Office of the Secretary.

In summary, including FEB roles and documents, in documents like the National Response Framework will minimize the duplication of Federal resources, especially in the areas of crisis communications and training programs within Federal field areas. Defining FEBs' existing functions in these planning documents would foster a clear understanding of our roles by the State and local governments that we partner with on our training programs and preparedness activities. Thank you again, Mr. Chairman, and I look forward to your questions.

Senator AKAKA. Thank you very much, Mr. Morris. Ms. Ainsworth, please proceed with your statement.

TESTIMONY OF KIMBERLY AINSWORTH,[1] EXECUTIVE DIRECTOR, GREATER BOSTON FEDERAL EXECUTIVE BOARD

Ms. AINSWORTH. Good morning, Mr. Chairman, and thank you for this opportunity to appear before you today to discuss the role of Federal Executive Boards in pandemic preparedness. My name is Kimberly Ainsworth and I am an employee of the EPA New England Region and have been assigned to a long-term detail as Executive Director of the Greater Boston Federal Executive Board. I am here today in that capacity.

In this role I have primary responsibility for the coordination and implementation of our programs and activities under our lines of business. Federal Executive Boards have played a meaningful role in emergency planning and response in many ways since created in 1961. The U.S. Government is the Nation's largest employer and among the top five in many areas across our country, including Massachusetts. During emergencies it is our responsibility to act uniformly to ensure the safety of our employees and customers.

To that end, Federal Executive Boards play a vital role from a workforce planning perspective. Although we are not first responders, emergency managers, or law enforcement professionals we can and do play an important role in public safety. Federal Executive Boards are positioned to provide crucial communication links among Federal agencies and State and local officials alike.

More than 180 Federal agencies maintain a presence in Massachusetts and approximately 90,000 citizens in our State are employed civilian, military, and postal positions. Although each Federal agency is responsible for the safety of its employees and the continuity of operations, collaboration is extremely important.

Our experiences in Boston prior to 2001 focused primarily on weather-related events. However, in the post-September 11 environment local agencies have greater needs and expectations of us. In 2002, Boston unveiled a comprehensive emergency decision and notification plan outlining an all hazards approach to emergency preparedness, response, and recovery from a workforce perspective including during a pandemic.

We collected 24/7 contact information for our local agency decisionmakers. A variety of communication strategies were implemented and designed to ensure that we could disseminate accurate, up-to-date, and consistent information around the clock.

Our experiences have taught us that there is a significant role that we serve during what I call perceived emergencies. For example, the first national political convention, since the 2001 terrorist attacks, took place in Boston in 2004 and was designated as a National Special Security Event. The Federal Executive Board represented the Federal workforce during the year-long security planning and also during the event itself.

Although it experienced no disruptions, there were several instances where rumor threatened public safety. The Federal Execu-

[1] The prepared statement of Ms. Ainsworth with attachments appears in the Appendix on page 109.

tive Board stepped in several times to coordinate the collection and dissemination of real-time information from subject matter experts within our Federal law enforcement community. We were able to quickly provide local agency leaders with accurate, consistent, and up-to-date information to make informed decisions to ensure the safety of the Federal workplace.

We employed similar procedures when, on July 7, 2005, Americans awoke to reports of terrorist attacks on London's public transportation system. At 9:38 a.m. in Boston on that same day two subway trains were involved in a minor collision underground. Although officials quickly determined that there was no link to the London incidents, an intense flow of misinformation circulated rapidly and the Federal Executive Board was called in to action.

There are so many examples nationwide. From massive crowds descending on government sites for civic rallies to extreme weather events, Federal Executive Boards have consistently been there to meet the information needs of our member agencies.

Most recently on January 31, 2007, Boston made national headlines when a marketing scheme went wrong. Thirty-eight electronic devices resembling Lite-Brite toys were placed in public locations to promote a movie. The suspicious devices sent public safety officials scrambling for many hours. Once again, agency leaders called upon the Federal Executive Board to provide accurate, up-to-date, and consistent information as the situation unfolded.

I believe that this information sharing and communication role will be increasingly important during a pandemic, particularly given the likelihood of its extended timeframe and anticipated widespread national impact.

Federal Executive Boards continue to be effective in this regard while overcoming recurring challenges. Many were captured in the May 2007 GAO report and are currently being addressed. The first step was the development of a business plan which includes two lines of business. These have, in short, helped Federal Executive Boards gain the attention of policymakers and increased credibility in our communities.

Thank you, Mr. Chairman, for this opportunity and I look forward to your questions.

Senator AKAKA. Thank you. Thank you very much, Ms. Ainsworth. Mr. Goin, please proceed with your statement.

TESTIMONY OF MICHAEL GOIN,[1] EXECUTIVE DIRECTOR, CLEVELAND FEDERAL EXECUTIVE BOARD

Mr. GOIN. Good morning, Chairman. And thank you for the opportunity to appear before you today to discuss the role of Federal Executive Boards in pandemic preparedness.

Again, my name is Michael Goin and I am an employee of NASA. Currently, I serve as the Executive Director of the Cleveland Federal Executive Board, a position I have held since 2004.

Like my counterparts, I see my responsibilities as that of ensuring the organization and delivery of programs and projects to support the two distinct lines of business, all while promoting communications, cooperation, and collaborations across agency lines.

[1] The prepared statement of Mr. Goin with attachments appears in the Appendix on page 142.

FEBs have attributed to the emergency response capability of the Federal community, as many reports have stated. My comments today will focus on the Cleveland FEB and what it has done in the areas of emergency preparedness. It is my belief that we serve a unique and vital coordinating role for our community.

Our organization covers 94 agencies in more than 17 counties. However, I should admit that we also include into that the Northern half of Ohio, where many of our agencies have responsibility. The activities, projects, and programs of the Cleveland FEB are coordinated utilizing special committees that focus on activities, one of those being emergency preparedness.

As stated, FEBs are not first responders. However, we feel that we enhance the response capability through our lines of business, enhancing the readiness of our responders as well as our employees.

Following September 11, 2001, we developed an all hazards plan and an emergency contingencies procedures and guidelines handbook to assist employees prior to, during, and immediately following emergencies or a disruptive event to include a pandemic. Through the efforts of the 28 FEBs, we are delivering and adopting best practices and setting measurable goals and adding credibility to the FEB as a source for emergency preparedness and human capital needs.

Much has been accomplished, but I must say that more needs to be done to ensure uniformity across the FEB network. Our FEB has been very active in supporting our lines of business, as well as developing partnerships with our State and local agencies. We partnered with the Cuyahoga County Board of Health to conduct a series of pandemic briefings designed to educate employees and managers on the plans and procedures that will help mitigate the effects of a pandemic outbreak.

We assisted FEMA with the distribution of emergency preparedness cards for all civilian and contract employees in our areas. We also enhanced our 24/7 notification system. Our member agencies are now part of a national emergency notification system, more commonly referred to as USP3. The web-based system can issue notifications in multiple formats: E-mail, text, text to voice, over 5,000 e-mail and text messages, and up to 10,000 outbound calls in a matter of minutes. Prior to that, sir, I would say that we were using a calling tree that was very inefficient.

In response to the recent floodings that many Ohio counties experienced, we will be adding a National Weather Service alert to that warning system. In addition to the notification capability, the system also provides members with a daily global snapshot of world events. Many of those snapshots include information relevant to pandemic concerns.

In a recent survey of our member agencies regarding their challenges associated with the pandemic planning, many identified issues related to telework programs. They are seeking our assistance in clarifying telework, emergency policies, hiring, and leave flexibilities. Much of that will be accomplished with the help and assistance of the Office of Personnel Management.

Many agencies point to the need for periodic security and emergency preparedness training, credible information on new develop-

ments, timely updates from reliable sources. I believe our close working relationship with FEMA will help us in the training needs. However, resource limitations may impact our ability to deliver all that is needed and all that is expected.

As the GAO report stated, there are inconsistencies across the FEB network in regards to different staffing levels, different funding models, different resources and different reporting structures. However, each Federal Executive Board faces the same degree of responsibility and the same degree of complexity in carrying out their duties. If FEBs are to be effective in these areas, our positions will need to be properly designated as having an emergency role? It should be written down.

It is also my hope that the final version of the National Response Framework will appropriately identify FEBs as having that emergency and supporting role.

In closing, I would like to share with you a comment, made by one of our agencies. It states: "The FEB is the only venue for agencies to interact with each other, thereby offering a means of communication that would otherwise not exist."

Thank you, Mr. Chairman, and I stand ready for your questions.

Senator AKAKA. Thank you. Thank you very much to the panelists for your statement and your testimony.

I have a question for all of you. This hearing is to discuss whether or not FEBs should have a formal responsibility in emergency response planning and implementation. You have heard from our first panelists. Do you agree with GAO's recommendations? Mr. Morris.

Mr. MORRIS. I absolutely agree. I think that will make our efforts and our job a lot easier, especially when we network with our State and local counterparts, and also some of the other Federal agencies because they will know that we really do have an official seat at the table.

Senator AKAKA. Ms. Ainsworth.

Ms. AINSWORTH. I, too, agree and I agree with what the previous panel said. I think that having it formally in writing somewhere provides us with the credibility hat we need. Right now there is lots of transition at the highest levels of government. The regional directors and the heads of the agencies transition sometimes every 2 years. The FEB is not yet necessarily part of the transition package. So I think if we have something in writing it provides us with the credibility that we need.

Senator AKAKA. Mr. Goin.

Mr. GOIN. I would also agree with the panelists regarding that and also remind you of the statement that we do believe that we are the only entity that is capable of performing that in our field. And our agencies have stepped forward and stated they will be engaged and they will support the mission of the FEB. So I think that is the right thing to do.

Senator AKAKA. Mr. Morris, your FEB has led the way in coordinating pandemic training programs and exercises. I would like to commend you for your efforts.

Mr. MORRIS. Thank you, Mr. Chairman.

Senator AKAKA. Aside from the issue of funding, what has been the greatest challenge in integrating the FEB in the emergency response planning?

Mr. MORRIS. The greatest challenge is really being able to formulate those relationships, especially those critical relationships with State and local government. Because for field Federal agencies, we are really dependent upon them because they are our first responders in any major disaster, whether it be a biological disaster with a pandemic or a weather-related—which Minnesota is rather famous for—or also a terrorist related event.

Obviously, if we had some additional resources, additional staffing even, that would be a greater help. But in light of that, having the authority of being in the Federal response plan would be a big help.

Senator AKAKA. Thank you.

This one is for the panel. Funding for FEBs has been a large topic of the conversation today. How do you generate revenues and establish an operating budget, if you have one? Let me ask Ms. Ainsworth first.

Ms. AINSWORTH. In short, we are very entrepreneurial at the Federal Executive Boards. In Boston, I am blessed to have a wonderful network of agencies who are really there to support me. So I know that I can ask for any level of resource, whether it be a case of copy paper, something as simple as that, or whether it be a person to help me with a particular event, a body. I have agencies that are willing to contribute.

That said, I feel like it is a hat in hand approach where I am continually going back to the trough and asking for these things and some of that might dry up sooner or later. So a more consistent funding stream would be beneficial to me and to others.

Senator AKAKA. Mr. Goin, how do you generate revenue?

Mr. GOIN. Very much in the same manner. It is very dependent upon our agencies in the collaboration and the efforts as agencies step forward as we identify the needs. We will tell them what the program is, what the program requires, and then ask their assistance in delivering that.

But I should also state that I am very fortunate to be an employee of NASA in our area, who have been very diligent about ensuring that we have all of the resources that we need and that are necessary for carrying our mission forward.

Senator AKAKA. Mr. Morris.

Mr. MORRIS. I am one of the fortunate ones. I happen to be a Washington employee of the Department of the Interior in the Office of the Secretary. They fund two positions in Minnesota very adequately and a modest budget for our office expenses and regular needs.

However, we have some great local support, too, especially from the Transportation Security Administration. They do a lot of heavy lifting for us when we need some—the National Weather Service and a number of different agencies—and really, the whole Federal community at large will support us if we ask.

But again, our base funding is a fairly stable thing. And I am the exception, rather than the rule.

Senator AKAKA. Since you have experience in this system, let me ask the panel again, outside of the direct appropriated funds is there a logical funding source that could support your efforts? Mr. Morris.

Mr. MORRIS. I think some of the issues that OPM is working on in developing a national funding strategy at the chief human capital officers level really deserves a lot of merit and really would enable many Federal Executive Boards to really do a lot more than be concerned about whether or not they are going to have operating funds for the next 6 months.

One of the great assets that we have is that stable funding. It is one of the primary reasons why we are able to perform to such an extent in emergency management because we have that base covered.

But I think what OPM has been doing in working with the chief human capital officers, in getting really a consistent funding scheme for the whole network, is a solution, an important solution.

Senator AKAKA. Mr. Goin.

Mr. GOIN. I think that OPM's approach is appropriate and I do believe that the answer is a national model and that way it takes a lot of pressure off of the local to step forward in that matter. We should be established in a manner where we have uniformity across the entire FEB network. Everyone should be operating from the same perspective, knowing what resources are available at the beginning of each fiscal year and not trying to establish it along the way.

So I think the answer is a national model and OPM is on the right track and we will certainly—as FEBs in the field—assist them in helping them understand what the local contribution would be from that.

Senator AKAKA. Ms. Ainsworth.

Ms. AINSWORTH. I agree with what both of my colleagues have said. Over many years I looked at many of the funding models and considered how FEBs could operate. I often liken a strategy to something like what GSA does with joint use space. A lot of us are in GSA buildings and our office space is joint-use space and GSA builds it into their rent schemes.

A similar funding agreement to something like the Federal Protective Service has on the national level, where all agencies contribute because the Federal Protective Service is an agency that impacts everybody.

So I believe that OPM is on the right track in pursuing the national model that they are looking at now.

Senator AKAKA. Thank you.

Ms. Ainsworth, you mentioned in your testimony that earlier this year the marketing scheme for a cartoon show created havoc in the Boston area and agencies looked to the FEB to collect and disseminate information. Being able to communicate is, of course, essential in the event of an emergency.

What communications exercising have you done to be sure that you will be able to communicate with the necessary people in the event of an emergency?

Ms. AINSWORTH. Mr. Chairman, it changes every day with technology. In that particular case, it happened to be during the day,

in the daylight hours. So we were able to utilize our e-mail schemes and get people when they were at their desks and they have blackberries and whatnot. So we, in that particular case, did focus primarily on electronic communications.

We do have now, we are part of the USP3 network, where we will be able to use telecommunication systems which will be a voice message and also text messaging to complement the e-mail. So there will be three ways that we can communicate 24 hours a day with our members.

Senator AKAKA. If you were to look at highlights, what strengths and weaknesses have these exercises highlighted?

Ms. AINSWORTH. I think our strengths are our ability to quickly get information and, as you heard me say several times, accurate, consistent, and up to date information out there. I talked a little bit about our experiences with perceived emergencies. And a lot of perceived emergencies are generated due to blogs and people getting online and talking about things or media picking up on a story and just sensationalizing a lot of it.

So our ability to be able to, for lack of a better word, fact check some of the information that is surfacing in these forums has really provided us with credibility.

We find that we are a greater resource to the non-law-enforcement and military agencies, the agencies that I call the administrative types, Social Security, IRS. We all work in the same buildings and rumor spreads very quickly, particularly when folks are on the Internet or watching television during the day.

Senator AKAKA. Mr. Morris, next year the Republican National Committee will hold its national convention in the Twin Cities. This could create a range of challenges in the event of a pandemic outbreak or other emergency. What role are you playing in preparing for this large national event? Are you working with the Boston and New York FEBs, which hosted national party conventions in the year 2004? What are you doing here?

Mr. MORRIS. Last winter we asked for both Boston and New York's after action reports from both the DNC and the RNC conventions in their respective cities. And then, in the early spring we had the U.S. Secret Service Special Agent in Charge come into our executive committee and give a briefing for all of us on all of the aspects on the National Special Security Event.

For this fiscal year we also had him come on our executive committee. We have also been working with both local and State government. Again, in Minnesota, we really know everybody on a first name basis, all of the major players in law enforcement and emergency management. And we are anticipating in the spring and probably early summer putting on a major, probably a daylong seminar on the ramifications of the Republican National Convention from September 1–4, 2008.

Senator AKAKA. Ms. Ainsworth, GAO recommends that performance standards be established for FEBs. Would this be a helpful tool or a hindrance to your preparedness work?

Ms. AINSWORTH. I personally applaud it. I think it is a great mechanism and I think they should exist. I think it will help us a lot.

Senator AKAKA. Mr. Goin.

Mr. GOIN. I believe it will give us a clear direction and something to work towards throughout the year. We can set our strategic position to go in that direction to ensure we are meeting those.

Senator AKAKA. Mr. Morris.

Mr. MORRIS. I agree with my colleagues on that point.

Senator AKAKA. I want to thank all of our witnesses for your thoughtful testimony and answers to the questions. There is clearly a lot more that needs to be done to prepare for a pandemic outbreak, and including FEBs in that planning.

In addition, we need to look beyond the Federal emergency response professionals and look to the preparation of the larger Federal employee population.

Senator Voinovich and I have asked the Government Accountability Office to examine how well prepared the Federal workforce is in the event of a pandemic influenza outbreak and I am sure we will hold a hearing when that report is released. And so we look forward to continuing to hear from you and to improve the system so that we can deal and respond whenever it is necessary.

With that, again, I want to thank all of you for being here.

This hearing is adjourned.

[Whereupon, 11:23 a.m., the Subcommittee was adjourned.]

PREPARING THE NATIONAL CAPITAL REGION FOR A PANDEMIC

TUESDAY, OCTOBER 2, 2007

U.S. SENATE,
SUBCOMMITTEE ON OVERSIGHT OF GOVERNMENT
MANAGEMENT, THE FEDERAL WORKFORCE
AND THE DISTRICT OF COLUMBIA,
OF THE COMMITTEE ON HOMELAND SECURITY
AND GOVERNMENTAL AFFAIRS,
Washington, DC.

The Subcommittee met, pursuant to notice, at 10:03 a.m., in Room SD–342, Dirksen Senate Office Building, Hon. Daniel K. Akaka, Chairman of the Subcommittee, presiding.

Present: Senator Akaka.

OPENING STATEMENT OF CHAIRMAN AKAKA

Senator AKAKA. This hearing will come to order. Good morning and welcome to our panel and to all of you in this room.

I would like to thank all of you for joining us at this hearing to discuss the status of pandemic preparedness in the National Capital Region (NCR). This is the second in a series of three hearings that our Subcommittee is holding related to pandemic influenza. Last week, we heard about the role of the Federal Executive Boards in responding to an outbreak, and on Thursday afternoon, we will discuss global surveillance of emerging infectious disease.

Public health experts believe that the world is overdue for a pandemic influenza outbreak. The Spanish flu pandemic of 1918 and 1919 killed approximately 40 million people around the world. Beyond this tremendous death rate, an estimated 20 to 40 percent of the population fell ill. The Centers for Disease Control and Prevention estimate that a flu pandemic could kill between 2 to 7.4 million people worldwide. In the United States, an estimated 200,000 people could die and another 2 million people could become ill. In short, we must prepare our communities to protect lives.

The effect of pandemic in our Nation's Capital, the heart of the Federal Government, would be dramatic. Comprised of 11 local jurisdictions, the District of Columbia, and parts of Maryland and Virginia, the NCR is home to over 5 million people, 340,000 Federal employees, 40 colleges and universities, and 27 hospitals. The NCR has the second-largest rail system in the country and hosts nearly 20 million tourists each year.

To help coordinate planning and response with the State, local, and regional authorities in the NCR, Congress established the Office of National Capital Region Coordination in the Homeland Se-

curity Act of 2002. In the past 5 years, we have spent millions of dollars through DHS and HHS grants to prepare the NCR for natural disasters, public health emergencies, pandemics, and potential terrorist attack.

According to the World Health Organization, since 1997, 328 people from South East Asia to Africa and Europe have been killed as a result of the bird flu or the H5N1 virus strain. In response to the growing threat, the CDC and HHS have granted Maryland, Virginia, and the District of Columbia a total of nearly $90 million in fiscal years 2006 and 2007 for pandemic preparedness. Congress has appropriated more than $7.5 billion since 2004 for pandemic flu-related activities, including $6.1 billion to HHS in fiscal year 2006 to work with the States on stockpiling antiviral drugs and vaccines.

In 2005, the CDC required all States to develop strategic plans for pandemic influenza, and in 2006, the CDC required the States to exercise them. In May 2006, the White House released a National Strategy for Pandemic Influenza. In addition, the local jurisdictions and NCR have their own strategic plans for pandemic influenza. However, while the NCR as a whole has a strategic plan for security in the event of a terrorist attack or a disaster, there is no regional strategic plan specifically for pandemic influenza. I think this will be a useful tool to develop, and so this hearing is part of planning for that.

Strategic plans are just the first step. These plans must be tested through repeated training and exercising. Weaknesses can be found and improvements can be made. This is the only way that the National Capital Region can become adequately prepared to face the pressing issue of a pandemic influenza outbreak. I am pleased to hear that DC will host an exercise with nonprofits on pandemic preparedness later this month.

Like the NCR, my home State of Hawaii faces unique challenges in pandemic flu preparation with its large tourist population and location between Asia and the contiguous States. The Hawaii Department of Health has been working hard to address pandemic preparedness, and earlier this year Hawaii held a massive exercise simulating a plane crash of a flight from Indonesia heading to Mexico City. The exercise scenario included passengers infected with avian influenza. It required Federal, State, local, and military responders to treat injuries related to the crash and possible exposure to avian flu. Participants walked away from the exercise understanding the importance of interoperable communication and the need for medical surge capacity.

In our Subcommittee hearings last year, we discussed the importance of interoperable communication in the NCR and the challenges to achieve interoperability with so many jurisdictions in the region. I believe you all have made great strides in this area and I want to congratulate you on these efforts, but there are other problems that need to be addressed.

Pandemic flu will be a shock to the entire medical system. Most hospitals function at capacity and leave little room for surge. Twenty-five percent of the population could be infected by the pandemic strain over a period of months or even years. Patients' needs could far outstrip available hospital beds, health professionals, and ven-

tilators, and I understand that DC, Maryland, and Virginia have made improvements for medical surge capacity, but more needs to be done to look at alternate sites for care and altered standards of care during a pandemic emergency.

Medical surge capacity is only one of the challenges related to treatment and public health response. Keeping our government's services running and caring for other sick patients are also distinct challenges in the event of a pandemic disease outbreak. I know that you all have put a lot of thought and energy into developing plans and working together to prepare for a pandemic. I am interested in hearing about the good work that I know is being done by the various jurisdictions in the region, how HHS and DHS are helping in that process, and areas where efforts can be improved.

I want to welcome our panel this morning and introduce Dr. Kevin Yeskey, Director of the Office of Preparedness and Emergency Operations and the Deputy Assistant Secretary in the Office of Preparedness and Response at the Department of Health and Human Services.

We have Christopher Geldart, Director of the Office of National Capital Region Coordination at the Department of Homeland Security.

We have Robert Mauskapf, Director of Emergency Operations, Logistics, and Planning in Emergency Preparedness and Response for the Virginia Department of Health.

And we have Darrell Darnell, Director of the Homeland Security and Emergency Management Agency for the District of Columbia and a Member of the Senior Policy Group in the National Capital Region.

I would like to note at this time that we also invited a representative from the State of Maryland to participate in the panel discussion this morning, but they were unable to provide a witness. I do, however, look forward to viewing their testimony to find out what their efforts have been on behalf of preparing the National Capital Region for pandemic influenza.

Our Subcommittee rules require that all witnesses testify under oath. Therefore, I ask all of our witnesses to please stand and raise your right hand.

Do you solemnly swear that the testimony you are about to give to this Subcommittee will be the truth, the whole truth, and nothing but the truth, so help you, God?

Dr. YESKEY. I do.

Mr. GELDART. I do.

Mr. MAUSKAPF. I do.

Mr. DARNELL. I do.

Senator AKAKA. Thank you. Let it be noted for the record that the witnesses answered in the affirmative

All witnesses will have 5 minutes to summarize their testimony, and without objection, your full written statements will be included in the record.

So we will begin with Dr. Yeskey. Dr. Yeskey, will you please proceed with your statement?

TESTIMONY OF KEVIN YESKEY, M.D.,[1] DEPUTY ASSISTANT SECRETARY, AND DIRECTOR, OFFICE OF PREPAREDNESS AND EMERGENCY OPERATIONS, OFFICE OF THE ASSISTANT SECRETARY FOR PREPAREDNESS AND RESPONSE, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Dr. YESKEY. Good morning, Chairman Akaka. Thank you for the opportunity to present the progress HHS has made in preparedness for pandemic influenza in the National Capital Region.

The ASPR mission is to lead the Nation in preventing, preparing for, and responding to the adverse health effects of public health emergencies and disasters and the vision we have is a Nation prepared. Like our response counterparts in other agencies, ASPR has taken an all-hazards approach to public health preparedness planning. The gains we make in increased preparedness and response capability for pandemic influenza will help us in preparing for other emergencies and disasters.

My oral testimony will focus on the Federal preparations for the National Capital Region and how HHS is supporting Maryland, Virginia, and the District of Columbia in their pandemic influenza preparations.

In November 2005, the President released the National Strategy for Pandemic Influenza, followed by a detailed implementation plan from the Homeland Security Council in May 2006. HHS also released its pandemic implementation plan and developed an operational plan, or as we call it, the "Pandemic Influenza Playbook," which details how HHS will coordinate the deployment and utilization of Federal medical resources. Our goal for the next year is to work with States to develop regional playbooks that will continue to promote integrated planning across tiers of government.

HHS also published multiple documents to assist State and local public health officials in their preparations for pandemic influenza. Two documents of note are the "Interim Pre-Pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States." This publication provides detailed strategies for the use of non-pharmaceutical interventions, such as social distancing.

The second publication, called the "Community Planning Guide on Mass Medical Care with Scarce Resources," provides guidance to health care professionals, permitting them to provide the highest possible standards of care in situations where resources are scarce. Included in this guide is a pandemic influenza case study.

HHS recognizes the lead role of the Department of Homeland Security during disasters of national scale. We support DHS by providing public health and medical expertise in all disasters and will do so in a pandemic. With regard to pandemic influenza, HHS has identified six senior health officials to support the DHS pre-designated pandemic principal Federal officials. Our six senior health officials have been working hand-in-hand with the DHS PFOs at the regional, State, and local levels and have participated in exercises, roundtable discussions, and other preparedness activities.

HHS has provided preparedness funding to States and local governments through two mechanisms, cooperative agreements and

[1] The prepared statement of Dr. Yeskey appears in the Appendix on page 150.

emergency supplemental funding. HHS has two cooperative agreements that aid in all-hazards preparedness, including pandemic influenza. The Hospital Preparedness Program is managed by ASPR and provides funds to States for surge capacity, development of alternative care facilities for health care during disasters, regional coordination among hospitals, and exercises. The Public Health Emergency Preparedness Cooperative Agreement managed by CDC funds public health activities such as surveillance, lab support, and exercises.

This year, $25 million was made available for a competitive award program that addressed surge capacity in hospital emergency care. Five health care facilities were awarded $5 million each under this program and one of the awardees was the Washington Hospital Center here in the District of Columbia.

Emergency supplemental funding has been designated specifically for pandemic influenza. By the end of this year, the Department will have awarded over $600 million in emergency supplemental funding through the CDC and ASPR to States, the District of Columbia, and other jurisdictions to upgrade State and local capacity with regards to pandemic preparedness.

The funding has occurred in three general phases. Phase one was used to assess gaps in pandemic planning and guide preparedness investments. Additionally, each State conducted summits between senior HHS officials and State officials and these summits were intended to facilitate community-wide planning and to promote shared responsibility for pandemic preparedness.

Phase two funds were used to develop an operational work plan to address identified gaps from phase one and to develop an antiviral drug distribution plan. Awardees also developed a pandemic exercise schedule.

Phase three funds will be used to address any outstanding gaps identified in phases one and two, such as stockpiling of ventilators, personal protective equipment, alternate care sites, mass fatality planning, and medical surge exercises, and these will be awarded as supplements to jurisdictions that currently receive awards through HHS cooperative agreements.

Also in 2007, ASPR placed a Regional Emergency Coordinator within the DHS Office of National Capital Regional Coordination to enhance the HHS contribution to this very important office. It is our objective to provide a full-time resource to the director of this office who can provide public health expertise, enhanced coordination and preparedness planning, and improved communications between the director and HHS.

The responsibility for pandemic preparedness is shared at the local, State, and Federal levels and includes private as well as public partners. HHS has provided funding and guidance to our State partners and we have actively engaged in workshops and exercises with our State and local partners to advance pandemic preparations. In the NCR, we have enhanced our partnership with the Office of National Capital Region Coordination by providing a full-time Emergency Coordinator to assist with public health and medical preparedness.

Thank you for the opportunity to present progress HHS has made in preparedness for pandemic influenza. With your leader-

ship and support, we have made substantial progress. The threat remains real. We have much left to do to ensure that we meet our mission of a Nation prepared for a potential influenza pandemic.

This concludes my testimony and I will be happy to answer any questions. Thank you.

Senator AKAKA. Thank you very much, Dr. Yeskey. Now we will hear from Mr. Geldart.

TESTIMONY OF CHRISTOPHER T. GELDART, DIRECTOR, OFFICE OF NATIONAL CAPITAL REGION COORDINATION, U.S. DEPARTMENT OF HOMELAND SECURITY

Mr. GELDART. Thank you, sir. Good morning, Chairman Akaka.

Senator AKAKA. Good morning.

Mr. GELDART. Thank you for the opportunity to appear before the Subcommittee today to discuss the role of the Office of National Capital Region Coordination within the Department of Homeland Security's Federal Emergency Management Agency.

I will describe how we work with our Homeland Security partners to enhance preparedness within the National Capital Region, and more specifically, our role in ongoing pandemic influenza initiatives as part of our core mission in the region.

The Chairman gave a very accurate summary of the National Capital Region, of what is at stake here in this region and also of the office that was created to help address that from the Federal perspective. The major role of the office is to oversee and coordinate Federal programs for and relationships with State, local, and regional authorities. The office originally was within the Office of the Secretary at DHS. However, with the passage of the Post-Katrina Emergency Management Reform Act of 2006, the Office of National Capital Region Coordination became a component of FEMA. We directly report to the FEMA Administrator.

The office coordinates daily with local, State, regional, Federal, private sector, and nonprofit entities. Some of those entities include the Joint Federal Committee, the Metropolitan Washington Council of Governments, Regional Emergency Preparedness Council, the National Capital Region Senior Policy Group, and FEMA Region III.

Since joining the office 5 months ago and looking at the overarching priorities of the office, three major areas came to the top. The first one is to enhance regionally coordinated catastrophic planning. We helped to initiate and we participate on the NCR Evacuation and Sheltering Plan Working Group led by the District of Columbia's Homeland Security Emergency Management Agency. We work with our partners at all levels of government in the region to coordinate activities of this Working Group with Federal continuity programs. There is an opportunity to take a substantial leap in the NCR in catastrophic planning as we are now in the Federal Emergency Management Agency, and looking at that agency's vision as it moves forward.

Our second area that we looked at is enhanced Federal coordination in the NCR. The National Capital Region Coordination Office is working on strengthening the Federal coordination with our State and local partners. We do this through our Joint Federal Committee. We do this through the several regional emergency

support functions, which I am sure my colleague, Darrell Darnell, will address when he gives his testimony. Operationally, the NCRC in its standing Federal coordination role ensures the coordination of Federal protective measures in advance of and immediately following an event.

The last area that we focus on is the Comprehensive Regional Risk Assessments. The region is committed to doing Regional Risk Assessments to focus its limited resources on the top key issues for the area. We have conducted several and we are refining the process. Within these priorities, pandemic flu is a major consideration. To meet the challenge of pandemic influenza, there are many entities that have a role in preparedness in the National Capital Region.

The Department of Homeland Security's role as described in the implementation plan for the National Strategy for Pandemic Influenza is to coordinate the overall Federal response during an influenza pandemic. The Federal Emergency Management Agency's role during a pandemic influenza outbreak is to coordinate the identification, mobilization, and deployment of Federal resources to support the life-saving and life-sustaining needs of the States and their populations.

In March of this year, the Federal Emergency Management Agency published a Disaster Assistance Policy establishing the types of emergency protective measures eligible for reimbursement to States and local governments during a Federal response to a pandemic influenza, among other things.

The role of the National Capital Region Coordination Office does not lead efforts to create pandemic influenza contingency plans. However, we coordinate and synchronize Federal interagency planning efforts with the National Capital Region jurisdictions. Our coordination efforts ensure complementary multi-jurisdictional planning for preparedness, response, and recovery actions in the region.

A pandemic influenza differs from any other—most other events that may happen in this region. It will last much longer. It will come in waves. The numbers of health care workers and first responders available can be expected to be reduced. Resources in many locations will be limited, depending on severity and spread of a pandemic influenza.

Given this, let me tell you how the National Capital Region Coordination Office is working towards its three priorities with its partners in addressing pandemic influenza.

The NCRC works in close coordination, as Dr. Yeskey has just mentioned, now with an HHS person on board to coordinate the activities and the grant streams that HHS has ongoing. We also work with HHS and the Department of Homeland Security in bringing a public health officer into our office, as well, to help coordinate planning between State, Federal, regional, and local authorities.

To enhance our Federal coordination within the region, FEMA, the National Continuity Programs disseminated their pandemic influenza guidance to more than 70 Federal departments and agencies in the NCR. We have coordinated with the General Service Administration to use the Federal Virtual Workplace in the event of a pandemic influenza, and the U.S. Postal Service regarding potential role in distributing prophylaxis. There are several exercises

that either recently have been conducted or that are planned, and I will be glad to cover any of those that the Chairman would want me to go over.

And the last is in our regional risk assessment area. Of course, pandemic influenza is a major piece in that.

In conclusion, I would like to say that the NCRC is at an exciting crossroads as it continues its central preparedness and coordination missions as part of the Federal Emergency Management Agency. Building upon the foundation that has already been constructed, the NCRC will continue to take proactive steps with our Homeland Security partners to protect, prepare for, respond, and recover from the public health threat posed by pandemic influenza.

Thank you, Chairman Akaka and Members of the Subcommittee, for the opportunity to discuss the role of FEMA's Office of National Capital Region Coordination. I will be glad to answer any questions that you have, sir.

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

Now we will hear from Mr. Mauskapf. Please proceed with your statement.

TESTIMONY OF ROBERT P. MAUSKAPF,[1] DIRECTOR, EMERGENCY OPERATIONS, LOGISTICS, AND PLANNING IN EMERGENCY PREPAREDNESS AND RESPONSE PROGRAM, VIRGINIA DEPARTMENT OF HEALTH

Mr. MAUSKAPF. Thank you, Chairman Akaka, for this opportunity to address the Subcommittee on this very important issue. I am Bob Mauskapf from the Virginia Department of Health and I want to discuss the activities in Virginia in combatting the potential for a pandemic.

Three points that I would like to emphasize are that Virginia has undertaken extensive planning efforts for a possible pandemic. Additionally, the three jurisdictions within the National Capital Region work closely together on all aspects of emergency planning and response. And there needs to be closer collaboration and communication on NCR emergency planning between the three jurisdictions and the Federal Government.

Monthly activity reports from throughout Virginia provide the governor anecdotal descriptions of local, regional, and State preparations. Pandemic influenza plans are coordinated across the NCR at State and local levels. School systems, private sector, critical infrastructure partners, all are collaborators in this effort.

One important gap in our planning is the coordination with key Federal agencies. NCR jurisdictions must be integrated into Federal continuity of operations and continuity of government planning. Federal employees live in our neighborhoods and are dependent on our services. If there are any preferential expectations to assist in the continuity of Federal operations, they have not been shared with us.

Under continuity of operations, governor Kaine has issued an Executive Order directing the State and all State agencies to create and update continuity of operations plans. Among the issues that are addressed in these plans are workforce reduction, staffing sup-

[1] The prepared statement of Mr. Mauskapf appears in the Appendix on page 166.

port coordination, identification of key personnel skills, leadership succession, systems readiness, and prioritization of agency functions.

Communications efforts focus on pre-scripted public service and public health announcements, keeping the media engaged, developing public education opportunities and materials, and developing message maps and establishing a public inquiry center.

All treatment planning has been collaborative with the health care community and specifically with the Commonwealth's 90 acute care hospitals. Mass vaccination plans have been developed and exercised at both the State and local levels. Virginia has focused much effort in the refinement of its antiviral distribution plan. Governor Kaine has authorized the purchase of over 770,000 courses of antivirals, now on hand within the Commonwealth. It is hoped that the Federal Drug Administration will approve shelf life extension programs for the States, thereby protecting this significant investment and extending the longevity of these medications.

In preparing for a possible pandemic event, the Commonwealth will distribute to target populations through a regional delivery network, to private sector pharmacies, military TRICARE clinics, community health centers, dispensing physicians, health care facilities, and local health departments. The plan is designed to provide antivirals to treat up to 25 percent of the State's population. This percentage is based on worst-case modeling from the 1918 pandemic. Participating pharmacies will receive and dispense the medications at no charge. A tracking system will assure that each individual receives only one course.

On the medical surge, approximately 3,600 staff beds are available State-wide for the influx of surge patients within 4 hours of notification. The immediate bed surge capacity within this 4 hours for the Virginia portion of the NCR is 780 beds. Surge capacity within 24 hours amounts to 5,600 patient surge beds among normal staff beds within the Commonwealth.

Virginia continues to identify additional potential alternate care sites to enhance the treatment of patients. Additionally, the use of mobile medical assets is a valuable option for providing medical stabilization and treatment outside of hospitals. Stabilization and treatment-in-place units are now in place for four of our six hospital regions. A vendor-managed inventory surge plan now under consideration proposes to provide medical surge materials from two locations to all of our sites within Virginia.

In August 2006, Virginia hosted a State-wide pandemic influenza tabletop exercise and followed it up in October of that year with a full functional exercise. All 35 local health districts participated and they operated 77 mass vaccination clinics and vaccinated over 10,800 citizens with annual flu vaccine provided by the State. Last month, Governor Kaine led a cabinet-level pandemic flu tabletop exercise. State and regional caches of antiviral treatment courses are in place to provide treatment to over 37,000 hospital staff. That is approximately 30 percent of the Commonwealth's hospital employees.

In summary, Virginia has planned extensively for a possible pandemic. Collaboration among Virginia, Maryland, and the District is

extensive and productive. Increased direct involvement of Federal agencies in the planning process is required.

Thank you for this opportunity to address the Subcommittee and I will be glad to take your questions.

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

Now, Mr. Darnell, will you please proceed with your statement.

TESTIMONY OF DARRELL L. DARNELL,[1] DIRECTOR, DISTRICT OF COLUMBIA HOMELAND SECURITY AND EMERGENCY MANAGEMENT AGENCY

Mr. DARNELL. Good morning and thank you, Chairman Akaka, for the opportunity to appear today to discuss pandemic preparedness in Washington, DC and the National Capital Region (NCR).

A pandemic is likely to cause both widespread and sustained effects and is thus likely to stress the resources of every State nearly simultaneously. This anticipated resource drain will make it difficult for States to assist each other, thereby reinforcing the need to develop a plan that reflects a substantial degree of self-reliance.

The District's response to a pandemic will include significant governmental coordination, communication to the public, increased medical surge capacity, and first responder protection. The District's Pandemic Influenza Preparedness Plan provides a framework to prepare for and respond to a pandemic. The plan is based upon the pandemic phases determined by the Centers for Disease Control and Prevention, in collaboration with the World Health Organization. These phases help identify the estimated impact of a pandemic on the government, residents, and visitors. These defined phases help ensure a consistent and coordinated response by the District of Columbia Government in the event of a pandemic.

To facilitate homeland security collaboration at the regional level, the NCR leadership established a Health and Medical Regional Programmatic Working Group which addresses mass vaccination and mass dispensing issues, as well as the Surge Subcommittee which addresses mass fatality planning throughout the NCR. These groups provide forums for regional planning and cooperation related to pandemic preparation, and to encourage local coordination, the District has developed partnerships with the business community and the city's hospitality industry in order to enhance preparation and response efforts.

In addition to forming partnerships, we have worked to be certain that before, during, and after an emergency, we are in a position to provide timely, accurate, and easily understood information and instructions to the public. The District has made information about pandemic influenza planning and preparedness widely available through websites as well as fact sheets and preparedness checklists for the media, schools, businesses, and public safety officials.

And to help ensure the efficacy of our planning and training efforts, the District has conducted a number of pandemic influenza-related exercises that have focused on managing Strategic National Stockpile assets in response to a pandemic flu outbreak in schools and the hospitality industry. Further, on October 17, we will par-

[1] The prepared statement of Mr. Darnell appears in the Appendix on page 176.

ticipate in an exercise with nonprofit organizations to test their continuity of operations plans using a pandemic flu scenario. These exercises have familiarized District personnel and the public with pandemic response plans and they have demonstrated the ability of DC agencies to coordinate the response effectively.

But, of course, a crucial aspect of pandemic response is early identification. District hospitals report diagnosed cases of influenza on a daily basis, which are compiled and compared against normal seasonal patterns. This monitoring will reveal an unusual or sudden spike in flu-like symptoms being reported at multiple hospitals and will notify public health officials of it early on.

Turning to medical surge capacity, in the event of a pandemic influenza outbreak, the number of patients seeking treatment at hospitals in the region would soar. The District and the NCR have invested in increasing hospital surge capacity in previous years to expand hospitals' ability to accept a larger than normal volume of payments. Throughout the NCR, the number of additional surge beds that were created was 2,367, and approximately one-third of those are located in hospitals here in the District of Columbia.

In order to effectively treat the large number of affected individuals who will need medical treatment during a flu outbreak, it is critical that hospitals, public health, and emergency medical service providers have adequate protection so that they themselves do not become infected. The District of Columbia and the NCR have purchased protective equipment for health personnel in order to maintain their safety while treating the public during a pandemic.

In conclusion, the District is continually preparing for response to a pandemic through the following activities: Identifying public and private sector partners needed for effective planning and response; planning for key components of pandemic influenza preparedness, including surveillance, vaccine, and antiviral distribution and communications; integrating pandemic influenza planning with other activities conducted under the Centers for Disease Control and Protection and the Health Resources Services Administration's Bioterrorism Preparedness Cooperative Agreements with the States; coordinating local plans and providing resources to assist in the planning process; exercising our plans; and continually coordinating with adjoining jurisdictions.

Thank you again for the opportunity to testify before you today, and I welcome any questions you may have.

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

Dr. Yeskey, according to CDC, among the three flu strains it is preparing for in the 2007 and 2008 season, one of them is a type AH3N2. This strain is linked to the 1968 Hong Kong pandemic flu, the deadliest flu in the past 30 years, which killed two million people worldwide. What is the outlook for this upcoming flu season and are we prepared for this type of influenza?

Dr. YESKEY. I would say that the preparedness activities that we are undergoing for pandemic influenza put us in a position to be able to respond better to any influenza, seasonal influenza that we might see this year. I can't comment specifically on the vaccines associated with that. I just don't have that material available. I would be happy to provide that answer to you. But I think because we have preparations in place for pandemic influenza, we have

done some exercises, we have done planning, we have done a number of different activities related to pandemic influenza, this puts us in a better position to respond to seasonal influenza, as well.

Senator AKAKA. You just mentioned that there has been an improvement in preparedness. Can you mention something about just one part of the preparedness that you have been working on?

Dr. YESKEY. Sure. I think a number of things. One, with regards to our exercises that we have done, a number of States have used seasonal flu clinics as a model for pandemic influenza mass vaccination, so we have looked at that, so that is an area where State and local authorities have practiced their seasonal influenza clinics and gaining efficiencies in those areas. In fact, Admiral Vanderwagen, the Assistant Secretary in our office participated in a drive-through seasonal flu vaccination clinic in his home county in Maryland last year.

We have exercised distribution plans for antivirals. We have hospitals that have looked at surge capacity and how to enhance their ability to respond to a peak in influenza patients. So I think those are areas where we have seen improvements in our preparedness for pandemic influenza that should carry over into seasonal influenza.

Senator AKAKA. Mr. Darnell, the first human-to-human transfer of H5N1 Avian influenza occurred in Indonesia last year and this is alarming. The first question everyone has in mind is, if NCR were hit with a pandemic influenza this season, are we ready?

Mr. DARNELL. Well, Mr. Chairman, I think we have taken all the steps that we possibly can to be ready. We have developed plans. We have exercised those plans. We have coordinated those plans with our partners within the NCR as well as with the Federal Government. We have also reached out to the hospitality industry, as well, because a major part of our economy is tourism. A number of people come through this area, and if I understand your question, the gist of it, it could spread really rapidly.

In fact, we recently held an exercise this past September 10 with the hotel and hospital industry in the NCR about an airborne disease that could affect people who were attending a convention here and who then traveled up and down the Eastern Seaboard. So we have stockpiled antivirals that we would need here and we also have the surveillance tracking system, and then working with the hospitality industry and their folks, as well, on how we could track people who are here for conventions, who are here visiting the Nation's Capital, and then follow up with those people in the event that they were infected or potentially could become infected.

Senator AKAKA. Mr. Mauskapf.

Mr. MAUSKAPF. I believe we are ready. With the stockpiling of over 770,000 courses of antivirals already on hand, the enlisting of over 600 pharmacies to aid us in dispensing, the development of a distribution network with private distributors backed by UPS and our State resources, exercising both mass vaccinations once vaccine becomes available every year for the past 3 years, exercising points of dispensing at the drive-through clinics and other asymmetric types of forms of dispensing, with the governor's executive-level decisionmaking exercise that he conducted with his entire cabinet earlier last month, and with our participation regionally in the up-

coming National Governors Association Region 3 exercise, which will go on November 8 and 9 here in the National Capital Region, I believe that we have made great strides toward preparedness.

Senator AKAKA. Thank you. Mr. Geldart, along the lines of strategic planning for such an event, I know that it took all the jurisdictions working together with ONCR a number of years to develop the NCR security strategic plan. The regions have individual strategic plans for pandemic influenza, but it seems like a cohesive plan for the NCR would be a useful tool. Has this come up in your meetings within the NCR and could you work as a facilitator to develop such a plan?

Mr. GELDART. Mr. Chairman, I would say that we do have a National Capital Region strategic plan. Within that strategic plan, we have a focus area that covers many of the aspects, if not all of the aspects, that go into mass care, medical surge, mass prophylaxis areas, which are the key pieces that go into a pandemic influenza plan.

To create a regional plan for pandemic influenza would definitely be a discussion that myself, Mr. Darnell, and the other folks that make up the Senior Policy Group in the National Capital Region would have to discuss to ensure that each State and entity that would take part in that would find usefulness in creating a regional plan, or is there a way that with the exercises that we do and the strategic plan that we have for the region, do they believe—do we all believe that covers us, how we need to for pandemic influenza planning. If they were willing, sir, I would be willing to facilitate, yes, sir.

Senator AKAKA. Thank you. We look upon you and the Department of Homeland Security to be a kind of facilitator to bring these groups together.

Doctors and pharmacists across the country are already offering flu shots. With the flu season upon us, there is a real opportunity for the NCR to test strategic plans that you all have been working on. What exercises are scheduled for NCR to use this flu season to test current plans for a pandemic flu outbreak? Mr. Mauskapf.

Mr. MAUSKAPF. Our mass vaccination with using annual flu vaccine was so successful last year that we have purchased an additional 12,000 doses of annual flu vaccine and have actually taken delivery of pre-loaded syringes and needles, and we have provided that to 19 of our 35 health districts, and they will be conducting mass vaccination exercises during October and November.

Some of the settings, for example, within the National Capital Region, in Loudoun County, we will actually be in a high school and do mass vaccinations during a class session, one hour, and we will test and use performance metrics to determine how long it takes to put each individual through the line to receive a vaccination. We will repeat this in several other areas.

Some of the themes, for example, on Veterans' Day in our Southwest Region, we will be giving flu vaccine to veterans. We have other thematic types of exercises that will be going on, as I said, 19 in all, and we will be taking complete advantage of the annual flu season being here for mass vaccination.

Senator AKAKA. Thank you. Mr. Darnell.

Mr. DARNELL. In addition to the October 17 exercise that we will be participating in with the nonprofits where we test their continuity of operation planning, we will also be participating in the Region 3 exercise that Mr. Mauskapf mentioned, as well, I believe on November 8 and 9. And then we are also going to be opening up two sites that we will use as sort of a test of how we would offer vaccines to the larger public and we will be vaccinating our Department of Health, our Metropolitan Police Department, and our Fire Department as a test for that.

Senator AKAKA. Thank you. HHS and DHS are the Federal leaders in pandemic emergency response. But a recent GAO report found that their respective roles haven't been clarified. Have HHS and DHS communicated to the 14 jurisdictions of NCR the roles and the responsibilities of each agency? Dr. Yeskey.

Dr. YESKEY. We at HHS support the role of DHS as the lead in the overall response to any event in disasters, any disaster, including pandemic influenza, and we have established our senior health official structure to mirror what DHS has set up in establishing principal Federal officials for pandemic influenza. We have that structure set up and our senior health officials, along with the DHS principal Federal officials, have been going out, meeting with State officials, meeting with local officials, and, among other things, talking about the structure and how we provide support with the public health and medical expertise to the overall structure of DHS. So we have communicated the message to our State and local counterparts of how we will structure our HHS support to DHS, in their capacity as overall lead in the event.

Senator AKAKA. Mr. Geldart.

Mr. GELDART. Yes, sir. I think building off of what Dr. Yeskey just commented on, the fact that DHS being the responsible party for response in a pandemic influenza and developing the plans, overarching planning, strategic planning framework for that. I think that has been communicated. I think it is very clear that the Department of Health and Human Services has a large role in developing the processes and procedures that are most important and that most people need to know from the health perspective. In that, the Federal departments are receiving guidance from the Department of Health and Human Services on what they do for their employees, their critical mission assignments, and how they protect those folks for continuity within each Federal entity.

So I think in that respect it is very clear for folks, and on top of that, looking at the NCR in particular right here, bringing in that person directly working for Dr. Yeskey into the Office of National Capital Region Coordination and embedding that person in all of the regional emergency support function meetings, the planning meetings, the development meetings that the region does, and having that direct continuity link from local jurisdictions, State jurisdiction, to the Federal folks, to HHS is a huge help for my office, I know, in coordinating between the Federal side and the State and local side, as well as for the State and locals to have somebody to turn to directly for answers for that.

Senator AKAKA. Dr. Yeskey, public health professionals all cite the need for alternative standards of care during pandemic out-

breaks. Can you explain to us what would happen for those requiring medical care for non-pandemic flu reasons during an outbreak?

Dr. YESKEY. Part of the public health and medical strategy is to, first, if you look at the epidemic curve of how a pandemic would look, part of our strategy is to reduce that overall impact, kind of drop the peak of that curve down a little bit so we don't have as many patients and reduce the overall load on hospitals. The second part is to disrupt transmission so we don't get an immediate burden on our hospitals but we spread that out over time as the pandemic moves through the country. So the intent is to reduce the overall number of patients who seek hospital care and to spread the burden out over a period of time so hospitals aren't as overburdened so they can work on taking care of the non-pandemic patients that show up at their hospitals, as well.

So our plan is really to try and keep those people who don't—who are infected with the pandemic virus—keep them out of the hospitals as much as possible and only the people who really need to be treated in hospitals, get them in there, and that enables the hospitals to reduce that surge need and to provide staffing for the non-pandemic patients, as well. Plus, the development and production of vaccines and the acquisition of antivirals, help keep that burden off hospitals.

We have published a document, as I said earlier, on allocation of scarce resources and it walks through the various aspects of how health care facilities can determine how they are going to allocate those resources when they are faced with those situations. So those are several of the strategies that we have employed in making sure that we try and meet the surge demand that will occur during a pandemic. We recognize that this is a tough issue. This is probably one of the tougher issues in pandemic flu preparations, is medical surge capacity with staff, with equipment and supplies as well as hospital services.

Senator AKAKA. In reducing impact and disrupting transmission, you would be working with these jurisdictions. You mentioned that you would try to keep people out of the hospitals as you do this. In case people would need hospital care, and knowing that today many of the hospitals around the country or in different communities are unable to deal with any surge for hospital care, are there any plans to deal with that?

Dr. YESKEY. Well, I think States and local communities and health care systems and hospitals are working on how to provide surge capacity. And one of the key components of our hospital preparedness program over the past 5 years is providing funding to States so they can address surge capacity, they can address interoperable communications, hospital incident command, and also address some of the equipment and supply needs that hospitals might face during a pandemic. So those are the strategies employed and then we work with the States and the local health care facilities to develop their surge capacity planning.

Senator AKAKA. Thank you. Mr. Mauskapf, Dr. Yeskey just mentioned medical surge capacity is going to be a huge challenge during a pandemic outbreak. According to your testimony, Northern Virginia, the most populous part of the State, has a short-term surge capacity of 1,100 beds with a benchmark of 1,162 beds. How-

ever, this shortfall doesn't take into account long-term surge requirements. How will Northern Virginia address a long-term medical surge?

Mr. MAUSKAPF. One of our methodologies obviously is going to be reaching out to the rest of the State, and we have plans that we can incorporate bed capacity throughout the State. Obviously, in a pandemic, if everybody is being affected simultaneously, that will be difficult.

We have developed four stabilization and treatment-in-place facilities throughout the State which are triage sites. That will enhance our capability. They are canvas facilities. They can be deployed quickly and they can be consolidated and used together. So those are our mobile resources.

We have also been identifying alternate care centers and we have established 26 Medical Reserve Corps around the commonwealth with a very significant number—I think the number is in my testimony—of medical professionals that would assist in staffing these alternate care sites and mobile care sites that I mentioned.

Additionally, with our exercises, we are prepared to request Federal assistance and DOD assistance. Indeed, we have Memoranda of Understandings with all of our military bases, and there is a significant amount of those that we do cooperative training and exercising with on a regular basis. So we go through the same process working with the Department of Homeland Security for our State Emergency Operations Center requesting Federal assistance. So those would be the methodologies that we use to enhance our surge capacity.

Senator AKAKA. Mr. Darnell, similarly, with the closing of DC General Hospital a few years ago, DC's reduced hospital infrastructure raises questions on its ability to meet medical surge capacity needs. While DC managed to increase bed capacity by 300 beds last year, that doesn't seem to be able to meet the potential need during a pandemic. My question to you is what is DC doing to address short-term and long-term medical surge capacity needs during a pandemic?

Mr. DARNELL. Well, I think the increase in the 300 beds that you referred to, Mr. Chairman, really is a normal steady State, if you will. We have already identified, as I testified earlier, the creation of about 2,300 or so beds in a surge capacity that we could bring to bear if we had this type of outbreak. Similar to what Mr. Mauskapf had indicated, we also have Memoranda of Understanding with our regional partners where we can identify available beds if we need to use them. We have also purchased medical field units that we can deploy if we need to have people hospitalized. We are also working with the DC National Guard to provide DOD support in the event that we have to do that, as well. And then, finally, we are identifying primary care facilities, outpatient primary care facilities that we could use as inpatient if we need to do that. So those are some of the steps that we are taking, and again, as Mr. Mauskapf said, we would also reach out to the Federal Government for more Federal assistance if we needed it.

Senator AKAKA. Thank you. Mr. Darnell, as you know, children could easily transmit the flu in concentrated places such as schools, and I know as a former teacher they can become a central source

for the disease. In a large outbreak, it might be necessary even to close schools. I wonder if you have taken this into consideration in your planning in DC. If so, how long would the schools be closed and have you begun planning with the school departments on alternative ways to provide education during a pandemic?

Mr. DARNELL. Yes, we have discussed what our response would be, and quite frankly, Mr. Chairman, I couldn't tell you how long the schools would be closed. In fact, I think the decision to close schools would be one that we would make with great care and great caution. My understanding of pandemic influenza is that unlike normal, if you will, influenza that is seasonal that generally runs from October to February or March, this particular strain, the H5N1, has tremendous peaks and valleys and there are possible times where it could be extremely high, where it could be extremely low, where it could transmit at varying rates that, quite frankly, again, as I understand it, we can't accurately predict.

So I think, first of all, we would take great care in making a decision to close schools. I would respectfully submit that one of the things we have to do is really communicate and educate the school system—educators, parents, and kids—in the things that they can do to protect themselves and protective actions that they can take, signs and symptoms of the disease, of the influenza, if they have it, where they can seek treatment immediately, as Dr. Yeskey said earlier in his response to one of your questions, so that we can sort of clamp down on the spread of it so we don't have to make that type of decision.

Senator AKAKA. In your March pandemic flu exercise, you mentioned that there were gaps in communication with the K through 12 schools. I am glad to hear you say that you have worked with parents, as well, on this. Were there any other ways that you have addressed the communication gaps in schools?

Mr. DARNELL. Yes. One of the things we have done, as I testified earlier, we have the websites, we have the checklist, the outreach directly to educators and parents and kids, and we just recently implemented what we call a Commander Ready Program that is a part of a Federal program for K through 12. Right now, we are concentrating on K through the age of 13, and it is an overall emergency preparedness training curriculum for kids that pandemic influenza is just one facet of that process.

We also have some informational material that we are going to be sending out to all of the District residents. Our goal is to send this information out to 100,000 households within the District of Columbia, again, that not only focuses on pandemic influenza, but emergency preparedness in general with that just being one facet of emergency preparedness.

Senator AKAKA. Dr. Yeskey, HHS has responsibility for overseeing and administering the Strategic National Stockpile of antiviral drugs and vaccines. Congress appropriated $6.1 billion over 3 years for HHS to work with States on building a stockpile of Tamiflu, Relenza, and available vaccines. Can you give us a status, an update on this?

Dr. YESKEY. Sure. A couple things about the medical countermeasures. We have established several goals that I think are in my written testimony, but one is to maintain a pre-pandemic vaccine

for about 20 million people. The second goal is to provide pandemic vaccine to all citizens within 6 months of pandemic declaration. Our third countermeasure goal is to provide influenza antiviral drug stockpiles for treatment of pandemic illness for about 25 percent of the population. And then the last one is to provide an influenza antiviral drug stockpile for strategic limited containment, so called "quenching." If an isolated case breaks out, we can use that treatment to prevent or delay the spread.

We have a couple of strategies for our countermeasures, the medical countermeasures for pandemic influenza. One is the advanced development piece of that, and that is to look at alternate ways to be less dependent on egg-based vaccination cultures, and we are looking at developing cell-based production of vaccine that gives us more vaccine production capability. We have also looked at antigen-sparing vaccine with the use of adjuvants. Adjuvants are materials added to vaccines that improve their efficiency, thus requiring a lesser dose for the vaccination. That would give us a bit more vaccine in our stockpiles. We are also looking at new antivirals. We currently have two in our stockpile. We are looking at production of other new antivirals.

We are also looking at Federal Stockpile acquisitions. That is the second part of our strategy. As I mentioned, we were looking at about 81 million treatment courses for the antivirals. Currently, we have about 37.5 million in the stockpile, with an appropriations request for another 12.5 million. States have also been given the responsibility of stockpiling about 30 million doses, and I think the last numbers that I saw, they have purchased about 15 million treatment courses. Money has been made available so States get a subsidy on the purchases and they are also able to purchase at the Federal price.

The third piece that we have developed, or the third strategy that we have looked at, is infrastructure building, trying to look at how we can increase the domestic infrastructure for vaccine production. We have invested money in the retrofitting of existing vaccine production facilities to specifically address some of the new cell-based technologies. So that, in a nutshell, is a summary of our progress with countermeasures.

Senator AKAKA. Thank you. Dr. Yeskey, CDC has the authority from the FDA under the Shelf Life Extension Program to store antiviral drugs and vaccines for a longer period of time than States or local governments. It must be a tremendous additional cost for States to replenish their purchases every few years. How do you decide when pandemic-related antiviral drugs and vaccines are stored by the State and when they are stored by the CDC?

Dr. YESKEY. A little bit about the Shelf Life Extension Program. That is an interagency agreement between the Department of Defense and the Food and Drug Administration, and the arrangement is that when drugs are stored appropriately—for the agencies that participate in this—when the drugs approach their shelf life termination, the FDA tests them to see how potent they remain in that period of time and then will grant, if they meet the standards established by CDC—and again, this is a superficial explanation of this process—but nevertheless, the FDA tests it and then assigns an additional 2 years or so shelf life extension for products that

meet their requirements—stored appropriately, maintained appropriately, and maintain their potency during testing. The agreement is that any material that does not meet those requirements when it is tested gets destroyed.

The process is fee-for-service and currently the VA, Health and Human Services—through the Stockpile—and DOD participate in this process. So that is the process that occurs, and it is all done through the Defense Medical Standardization Board.

For States to participate in this program would require a significant increase in the demand on FDA resources and on the Department of Defense to administer this. At the direction of the HSC, an interagency panel met to look at whether we could offer this program to the States. For the present time, the recommendation out of the panel was that they would not be able to accommodate States in the Shelf Life Extension Program, but they have not absolutely ruled that out, to the best of my understanding. So they are going to continue to look at this to see if there is a mechanism by which States can participate in a Shelf Life Extension Program. But for now, in the DOD-FDA Shelf Life Extension Program, they do not.

Senator AKAKA. Thank you. Mr. Mauskapf and Mr. Darnell, you have heard Dr. Yeskey mention about stockpile. Can you provide us with a stockpile update for Virginia and for DC? Mr. Mauskapf.

Mr. MAUSKAPF. Virginia has received the highest rating from CDC, a green rating, for the last 3 years running. We will have our State review later on in October for our fourth year and we anticipate a like situation.

We have developed what I think is a pretty imaginative set of partnerships with private sector. A national transportation company has undertaken a ground contract for all State agencies within the Commonwealth and that includes—the RFP that went out included that to get that contract, they must also deliver our stockpile, and, in fact, they were signed on to that and that is now part of their contract.

We have a network of five Receive Stage and Store sites around the Commonwealth to receive the stockpile. We are working with Wal-Mart at their distribution center in Harrisonburg as a potential new site. We have identified over 300 Points of Dispensing (PODs), around the Commonwealth. We have enlisted the assistance of 26 Medical Reserve Corps in helping to dispense our stockpile. We also have tested in every single one of the 35 health districts twice a year either a mass vaccination or a mass dispensing exercise.

Under the Cities' Readiness Initiative in the three regions that are CRI areas, the National Capital Region, Metropolitan Richmond, and Hampton Roads, we have done asymmetric dispensing exercises, which include drive-through exercises, school bus delivery of meds, bookmobiles. We are working now with major newspapers in the three regions to develop our printed material and we have agreements with them to develop the printed material that is attendant to dispensing within 20 hours of request. So I think we are in pretty good shape for the stockpile.

Senator AKAKA. Thank you. Mr. Darnell, will you update us on your stockpile for DC?

Mr. DARNELL. Yes, sir. We have about 45,000 treatment regimens that we have stockpiled. We have the green rating from the CDC, as well, green minus for the receipt and distribution of the Strategic National Stockpile, and similar to my neighbors in Virginia, we have also exercised how we would distribute the stockpile, identified the sites where we would do that. As I indicated earlier, we will have a test of that in November as we do that with some of our public safety personnel on how we would carry that out. And so we continually take a look at that. As Chris Geldart indicated earlier, as a part of our shelter and evacuation plan of identifying sites and distribution shelters and those different types of things, that is a part of that process, as well, for the District, let alone for what we are doing for the larger NCR.

Senator AKAKA. Thank you. Mr. Darnell and Mr. Mauskapf, as I mentioned in my opening statement, there are 20 million tourists who visit the NCR every year. There are also 130,000 students in the region who may not be permanent residents. Are you taking non-resident populations into account, Mr. Mauskapf?

Mr. MAUSKAPF. Absolutely. We don't ask to see a State-specific identification card. With our border States, we have entered into agreements. If we open our PODs and they are closer for some of their citizens, there is no problem for them coming across the border. We have done, as recently as last October, a joint exercise with the District and with Maryland. We have received the stockpile and we have worked together in the management of the stockpile and the distribution to the PODs throughout the National Capital Region. There is full understanding that we will be mutually supporting in the event of such a requirement.

Certainly in Virginia Beach and Williamsburg and areas where we have huge populations of visitors during the tourist season; all our colleges and universities have been integral to our planning and exercising and certainly they are all considered and will be part of the distribution and dispensing.

Senator AKAKA. Thank you. Mr. Darnell?

Mr. DARNELL. Yes. I would just echo Mr. Mauskapf's comments, as well. The exercises that he referred to, we will have participated in that. We all have Memoranda of Understanding that we would support each other in the event of this type of outbreak.

With regard to the colleges and universities that are located within the District of Columbia, we have what we call a College and University Consortium where we meet with them on a monthly basis to discuss emergency preparedness issues in general, and again, this is one facet of it. So we certainly would include students in that equation if they needed to receive treatment.

Again, we have a close working relationship with the DC Greater Board of Trade as well as the DC Chamber of Commerce and the hotel and hospitality industry, so again, as I stated earlier, if there was an outbreak, we would be able to utilize their resources to track individuals who come in and out of the city and as they leave so that we can contact them in case they were infected or had the potential to become infected.

Senator AKAKA. Mr. Mauskapf, according to CDC guidance, the States may elect to request assistance from the Postal Service to aid in the direct delivery of antiviral medications to residences.

Would this work for something as big as pandemic flu, or have you exercised this or dealt with the Postal Service on this?

Mr. MAUSKAPF. We have done joint planning with the Postal Service in the National Capital Region under the Cities' Readiness Initiative Program. It is the most efficient and effective means to get medications out to the citizens. The issue with delivering through the Postal Service is security. A requirement from the Postal Service's unions is that they have an armed guard riding along with them if they are, in fact, delivering meds.

During a pandemic or during any major event, you can imagine the requirements that are going to be levied upon law enforcement entities, so it is difficult to assure the Postal Service that we will be able to have an armed guard with each one of their mailmen and delivery vehicles. We have looked at mobilizing the Guard in the Commonwealth. We have looked at mobilizing the Department of Corrections. And we have worked with local law enforcement agencies. We agree that is a viable methodology. The issue is going to be whether or not we will be able to provide the law enforcement to support the union requirement.

Senator AKAKA. Mr. Mauskapf, are there plans to provide the letter carriers—and you mentioned the guards—but do you have plans to provide letter carriers with police protection?

Mr. MAUSKAPF. That is what I am saying, that is the issue, whether or not there is sufficient law enforcement or Guard or Department of Corrections armed guards to provide—the requirement is 1,100 when we modeled this. It is a requirement for 1,100 for the Virginia portion of the National Capital Region to handle all the routes, if they are doing two routes a day. They have to cease all mail delivery, do two routes a day of nothing but medications. So that is a requirement of 1,100 personnel that would be able to do that. Given the other requirements upon law enforcement at that time, that is going to be a tough nut to crack.

So we are continuing to look at that, and one of the initiatives that we have studied is going to the Federal Government for the National Capital Region and requesting the assistance of Federal law enforcement agencies to support us in the event of doing this. That has not been developed any further than the idea level right now.

Senator AKAKA. Thank you. The Federal Government is a huge partner in the NCR. I would like to hear from all of you on how OPM and local Federal Government agencies have been working with you on coordinating their pandemic response plans. Dr. Yeskey.

Dr. YESKEY. At HHS, we have been working on our continuity of business, continuity of operations plans by trying to work through identifying our essential functions that we will need to carry out during a pandemic with a reduced workforce. We are also looking at identifying those critical personnel and those personnel who can work from home and then looking at the mechanisms by which we can enable them to work from home and carry out those functions.

I can't comment on the interactions with OPM since this continuity of business is handled outside of my office, but I can get that information for you for the record.

Senator AKAKA. Thank you. Mr. Geldart.

Mr. GELDART. Yes, sir. As I mentioned earlier, and to lead off of what Dr. Yeskey just said, to tail onto that, the Federal employees that work within all of these departments and agencies are residents within this region, residents within the States somewhere within this region. So from that perspective as each of the States are doing their planning and localities are doing their planning, within that are the people that come to work here. However, the higher level of planning that needs to happen, and this is where Dr. Yeskey was going towards, is those critical mission areas, those things that the Federal Government must continue to do to function.

From the Federal Reserve Board perspective, to give an example, the Federal Reserve pays us all and they also pay many State employees. That is part of their mission. That would need to continue. So as Dr. Yeskey says, each agency is looking in to see what are those employees that consist and make up that critical mission area, and then what is that continuity of business plan that we have as an agency to ensure that those folks are being addressed so that we can maintain those critical mission areas.

As the individual departments and agencies come up with those plans, that is going to be needed to take a look at are they doing prophylaxis? Are they looking at doing the Tamiflu things that were mentioned before, and are those contracted or are those stored? Those kind of things obviously are going to be needed to be coordinated throughout the region.

Senator AKAKA. Mr. Mauskapf.

Mr. MAUSKAPF. We have done extensive work with the Federal Reserve Bank in Richmond, and as recently as 2 months ago the three of us met with the Federal Reserve Bank and the Board of Governors here in DC to discuss this very issue. We have got Memoranda of Understanding with each of our military bases, and when I talked about our antiviral distribution, I mentioned that we do it through the TRICARE clinics and military clinics assigned to them.

As Mr. Geldart said, the Federal employees are residents of our communities and certainly we have planned for their coverage. The issue comes when we talk about continuity of government, continuity of operations planning and whether or not there are expectations for early delivery of medications, be they prophylaxis, antivirals, or flu vaccine when it becomes available. How is that going to be happening and what is the requirement? Identification of key personnel and the synergizing, if you will, of the Federal plans with our distribution and dispensing plan is key, and that has yet to happen with most of the agencies.

Senator AKAKA. Thank you. Mr. Darnell.

Mr. DARNELL. I would echo those comments and I think I would also add that we probably need, or not probably, in my opinion, we need more transparency in terms of OPM and what their plans are, under what conditions those plans will be implemented, and how we interact with that. Quite frankly, it would probably be nice just to get them to let us know when they are going to let people leave work early, as we are concerned, in the District of Columbia.

So in this case, in particular, what telework plans do they have if they are going to allow people to work regular hours? Again, as

Mr. Geldart indicated, what are their mission-critical agencies or personnel that are going to continue to work, non-essential personnel who won't be working? Those are shifting patterns that affect our transportation systems, that affect our businesses, all those different types of things. So we just need more transparency with the Federal Government on those types of things.

Fortunately, I think we are headed in that right direction. As Mr. Mauskapf said, we met 2 months ago with the Federal Reserve Board Governors. We are actually, as the District of Columbia Government, we are going to be meeting with my counterparts at OPM and on Capitol Hill in the Legislative Branch to discuss some other issues and this will be one topic that we bring up, as well.

Senator AKAKA. Thank you. Dr. Yeskey, the cost of treating patients infected with pandemic flu over time is going to be considerable, especially in light of the fact that 46.6 million Americans are without health insurance. Have you given any thought to the costs of care for those who do not have health insurance?

Dr. YESKEY. Our overall strategy, again, is to try and keep people out of hospitals by preventing the transmission of disease. So part of our strategy is to minimize the number of people who are infected.

With regard to the health care costs associated with the surge in patients who might seek hospital care, that is an area that is not covered within my office. But again, I would have to go back and talk to our CMS folks and try and provide you with an answer to that.

Senator AKAKA. Well, thank you. Thank you very much, all of you. You have been helpful to the Subcommittee in dealing with the pandemic flu. I am impressed by the work that our witnesses have done, but it is clear that we need to do more to prepare for a potential pandemic flu outbreak in the National Capital Region. I look forward to continuing this discussion on preparedness and staying informed about what additional progress is being made.

I want to thank you again for your responses. I appreciate you being with us today. The record will remain open for 1 week for any statements or additional questions Members may have.

With that, this hearing is now adjourned.

[Whereupon, at 11:30 a.m., the Subcommittee was adjourned.]

FORESTALLING THE COMING PANDEMIC: INFECTIOUS DISEASE SURVEILLANCE OVERSEAS

THURSDAY, OCTOBER 4, 2007

U.S. SENATE,
SUBCOMMITTEE ON OVERSIGHT OF GOVERNMENT MANAGEMENT, THE FEDERAL WORKFORCE AND THE DISTRICT OF COLUMBIA,
OF THE COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS,
Washington, DC.

The Subcommittee met, pursuant to notice, at 2:32 p.m., in Room SD–342, Dirksen Senate Office Building, Hon. Daniel K. Akaka, Chairman of the Subcommittee, presiding.

Present: Senators Akaka and Coburn.

OPENING STATEMENT OF SENATOR AKAKA

Senator AKAKA. I call this hearing to order. This is a hearing of the Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia, and I call it to order. I want to welcome our guests and thank you very much for being here.

This is the third in a series of hearings that my Subcommittee is holding to ensure that we are as well prepared as possible to handle the possible pandemic flu. Last week, we examined the role of the Federal Executive Boards in assisting in pandemic flu preparation, and earlier this week we examined National Capital Region efforts to prepare for such a public health emergency.

Today's hearing focuses on efforts to project our defenses beyond our borders. The Government Accountability Office will also be releasing a report today entitled "Global Health: U.S. Agencies Support Several Programs to Build Overseas Capacity for Infectious Disease Surveillance." That report reviews several of the programs we will hear about during this hearing.

The consensus among public health specialists is not if there will be another pandemic influenza outbreak in the United States, but when and if we will be prepared when it happens. A pandemic of avian influenza, the disease being most closely monitored by the public health community, as you know, could kill hundreds of millions of people throughout the world and alter the balance of power within and between nations. That is how huge it is.

As we will hear from Colonel Erickson shortly, a 2001 National Intelligence Estimate concluded that emerging infectious diseases

are a global security issue, destabilizing countries and institutions, impacting economic growth, and obstructing trade.

Experts agree that the way to reduce the impact of a pandemic disease is to identify, isolate, and treat it at the place it emerges. Similar to our efforts to turn back the threat of terrorism, it is better to defeat this enemy in its homeland and not in ours.

The topic of our hearing today, global disease surveillance, seeks to do just that. By identifying and isolating diseases early and where they first appear, we can minimize the potential impact on the United States by preventing the spread beyond its original borders. If they do spread, the early information provided by surveillance systems allows us to be better positioned to take early steps to protect Americans.

The last major flu pandemic to hit the United States was the 1968–69 Hong Kong flu outbreak, which caused approximately 34,000 deaths. Since then, we have become more vulnerable to dangerous diseases that move among countries. Increased international travel coupled with the impact of climate change, economic development, land use, and in some cases the breakdown of public health are all factors in the emergence of new and novel strains of disease that impact many countries.

The rapid spread of severe acute respiratory syndrome in 2003 demonstrated how a disease outbreak can pose a threat beyond the border of the country in which it originates. The impact of another severe pandemic flu outbreak could devastate the United States and, in particular, the U.S. economy.

In a March 2007 report, the Trust for America's Health estimated that a severe pandemic flu outbreak would cause a drop in the U.S. gross domestic product of roughly 4.25 percent to 6 percent. The Trust defines a "severe outbreak" as one that would make approximately 90 million Americans ill and cause roughly 2.25 million deaths. An outbreak of this severity could almost certainly lead to a major economic recession. According to the Congressional Budget Office, a contraction of this size could cause the second worst recession in the United States since World War II.

Hawaii has taken a lead in ensuring its residents and visitors are protected and prepared to respond swiftly to any pandemic disease outbreak. For example, Hawaii became the first State to screen incoming airline passengers on a voluntary basis. Health officials have stockpiled enough antiviral drugs to treat a minimum of 25 percent of the resident and visitor population. The Hawaii Department of health is developing a lab with the capability to test for avian flu and other flu strains. Hawaii has also established a Medical Reserve Corps to recruit volunteers to assist in a public health emergency.

In March, the Hawaii Department of Health launched a public awareness campaign called "Share Aloha, Not Germs" to raise public awareness of pandemic threats and the steps everyone could take to minimize them. And this past July, Hawaii conducted the most ambitious pandemic flu exercise of its kind. The exercise, called "Operation Lightning Rescue," involved a fictional commercial airplane carrying a number of suspected avian flu victims which crashed on Midway atoll while traveling from Jakarta to

Mexico City. The exercise trained local, State, and Federal officials in limiting the impact of a flu outbreak.

It is widely accepted that the key to control of any pandemic outbreak is early identification and rapid response. The earlier a dangerous disease is identified and steps are taken to respond, the higher the probability that such interventions, including development of vaccinations can be successful. The global disease surveillance activities we will examine in this hearing can help forestall a potential pandemic by identifying those threats where they first emerge in other countries.

While international travel and other factors have changed the way emerging disease spreads among nations, the nature of emerging disease itself has also changed. Now, more than ever, the majority of diseases capable of creating a pandemic have come from animals and spread to humans. We need only look at some of the most recent global health threats to find evidence of this trend. West Nile, HIV, SARS, and most recently, avian influenza, or bird flu, are all diseases that have originated in animals and then spread to humans to create global health emergencies. This means that we must not only monitor new human diseases, but also those that arise in all types of animals.

Emergence of the West Nile virus in 1999 in New York City is a clear example of the value of bringing the human health and animal health communities together. At first, the public health community was focused on reports of elderly people coming down with similar symptoms, but when flamingos and black crows began dying at the Bronx Zoo around the same time, a veterinary pathologist there, Dr. Tracey McNamara, made the connection between the sick birds and the sick people. Her analysis provided the breakthrough in diagnosing West Nile virus, a disease that had never before been seen in the Western hemisphere.

Having just observed National Preparedness Month, I can think of no more important issue than situational awareness, an essential element of homeland security. Situational awareness must include being aware of emerging infectious diseases before they devastate our communities.

So I look forward to hearing from all of our witnesses about their work in contributing to our awareness of those potential threats to our homeland. Again, I want to thank our witnesses for being here today to discuss this important issue. And I want to welcome the witnesses to this Subcommittee today: Dr. Ray Arthur, Director of the Global Disease Detection Operations Center at the Centers for Disease Control and Prevention at HHS; Dr. Kimothy Smith, Director of the National Biosurveillance Integration Center at the Department of Homeland Security; Colonel Ralph Erickson, Director of the Department of Defense Global Emerging Infections System at Walter Reed Army Institute of Research; Dr. Kent Hill, Administrator for Health at the U.S. Agency for International Development; and David Gootnick, International Affairs and Trade, U.S. Government Accountability Office.

I want our witnesses to know that it is the custom of the Subcommittee is to swear all witnesses, and I would like to ask all of you to stand and raise your right hand. Do you solemnly swear that the testimony you are about to give this Subcommittee is the

truth, the whole truth, and nothing but the truth, so help you, God?

Mr. GOOTNICK. I do.

Mr. ARTHUR. I do.

Mr. SMITH. I do.

Colonel ERICKSON. I do.

Mr. HILL. I do.

Senator AKAKA. Thank you. Let it be noted for the record that the witnesses answered in the affirmative

Before we start, I want you to know that your full written statements will be part of the record. I also would like to remind you to keep your remarks brief, given the number of people testifying this afternoon.

So, again, we appreciate your being here. Thank you for being here, and I will ask Mr. Gootnick to begin.

TESTIMONY OF DAVID GOOTNICK,[1] DIRECTOR, INTERNATIONAL AFFAIRS AND TRADE, U.S. GOVERNMENT ACCOUNTABILITY OFFICE

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

Mr. Chairman, I am pleased to discuss GAO's recent review of U.S. programs to build overseas capacity for infectious disease surveillance. As you have well stated, Mr. Chairman, H5N1 influenza in birds has the potential to evolve to a disease transmitted from person to person, setting the stage for a human flu pandemic.

As you said earlier, SARS in Asia demonstrated, amongst other things, that international response to an outbreak is dependent on cooperation from affected countries, and West Nile virus highlighted the need for improved links between human and animal surveillance.

In this environment, the United States has a key interest in building capacity within developing nations to identify and respond to outbreaks of infectious diseases. Building and sustaining this capacity poses considerable challenges, including shortages of trained personnel, limited lab capability, and weak or deteriorating infrastructure, including facilities, roads, and communications, in the overseas environment.

In this context, you asked GAO to report on: One, the key U.S. programs that build capacity for infectious disease surveillance within developing nations; and, two, agencies' efforts to monitor the progress of these programs.

We identified a set of activities generally embedded in larger programs that also conduct research, support outbreak investigations, link with larger networks, and, in the case of DOD, enhance readiness and force protection. In addition, even these programs which we have reviewed exist in a larger context that includes disease-specific surveillance, such as vertical systems for HIV, polio, and, increasingly, avian influenza.

From 2004 to 2006, CDC, USAID, and DOD obligated about $84 million to capacity-building efforts. CDC's GDD Initiative is establishing centers of excellence overseas that, amongst other things, strengthen labs, develop active surveillance systems, and train

[1] The prepared statement of Mr. Gootnick appears in the Appendix on page 184.

local health workers. CDC and AID together support 2-year field epidemiology training programs in 24 countries. These programs have trained over 350 epidemiologists and lab professionals. For example, CDC's Central American program reports that it has trained, placed, and supported 58 master's level epidemiologists and provided field-based training to a larger cadre of health workers at local levels. AID and CDC also provide technical assistance and training to African nations to integrate disease-specific surveillance systems and prepare to meet the broadened national requirements of recognition and response as established by the revised international health regulations.

DOD, through its GEIS program, has funded more than 60 small-scale projects for surveillance and capacity building, again, within their larger mission of readiness and force protection. For example, in parts of Southeast Asia, GEIS has disseminated a syndromic surveillance system designed for resource-poor settings.

Finally, AID independently funds a number of activities to, for example, build capacity and develop tools for monitoring and evaluation.

Regarding coordination, we found that CDC and AID through cooperative agreements, joint funding, and staff details frequently work in partnership. DOD and CDC report that collocation of major operational centers, for example, in Kenya and Egypt, facilitates communication.

In a study released this week, the Institute of Medicine observed that collaboration between CDC and DOD is critical to ensure the most effective use of resources targeting avian influenza. The IOM recommended, amongst other things, that DOD further strengthen this critical linkage for emerging infectious diseases.

Individual programs monitor activities, such as the number of trained individuals and the number of outbreak investigations conducted by their trainees. They recently began efforts to evaluate the larger impact of these programs, but have yet to report results. Evaluating these programs will be challenging for a number of reasons.

First, capacity efforts are generally collaborations within a host country health ministry, making impact of a program difficult to isolate.

Second, data quality and competing priorities may complicate efforts to evaluate programs.

And, finally, demonstrating program impact is very difficult in the complex and changing environment in which these programs operate.

In closing, Mr. Chairman, a number of activities are underway. However, outside of the vertically oriented disease-specific systems, support for broadly targeted assistance to build capacity for infectious disease surveillance has been limited. Numerous studies and experts have noted that investment in these programs is small compared to the risks of emerging infectious diseases and the challenges associated with sustained preparation and effective response.

Mr. Chairman, this concludes my statement. I am happy to answer your questions.

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

Now we will hear from Dr. Arthur.

TESTIMONY OF RAY ARTHUR, PH.D.,[1] DIRECTOR, GLOBAL DISEASE DETECTION OPERATIONS CENTER, CENTERS FOR DISEASE CONTROL AND PREVENTION, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Mr. ARTHUR. Good afternoon, Chairman Akaka. My name is Dr. Ray Arthur, Director of CDC's Global Disease Detection Operations Center. I have 15 years of specialized experience in detecting and responding to global disease outbreaks, including 6 years at the World Health Organization and 5 years at the DOD Medical Research Unit in Cairo, Egypt. I am pleased to discuss CDC's global health investments that build capacity for disease detection and response.

CDC has approximately 200 staff assigned to 50 countries throughout the world and supports an additional 1,200 locally employed staff in these countries. As you have indicated, SARS demonstrated that a highly infectious disease can quickly spread around the world. In 2004, recognizing this, the U.S. Congress provided funding for CDC to establish the Global Disease Detection Program. The GDD program built on CDC's health strengths and brought together three established programs: The Field Epidemiology Training Program that was just mentioned, which provides training on the investigation and control of outbreaks; the International Emerging Infections Program, which integrates disease surveillance, research, and prevention and control activities; and, third, influenza activities, including the development of surveillance capacity.

In addition, the GDD Program coordinates with other global health programs at CDC, such as HIV/AIDS, polio, and measles, to leverage resources that contribute to outbreak detection and response. As an example of this capacity, one of the first places to identify the SARS coronavirus was a global polio network laboratory in China.

Earlier this year, staff from the CDC Global AIDS Program in Nigeria, played a critical role in the diagnosis of the first human case of avian influenza in Sub-Saharan Africa. The GDD Program then utilized its regional resources to deploy staff and continue the response activities.

The central focus of the GDD Program is the establishment and expansion of the GDD Centers mentioned by Mr. Gootnick. Strategically positioned around the world, these centers focus on five activities in key areas: Outbreak response, surveillance, training—both epidemiology and laboratory—research, and networking. CDC currently operates five centers—two mature centers in Thailand and Kenya, and three developing centers in Guatemala, China, and Egypt.

The GDD Operations Center serves as CDC's central coordination point for international outbreak information. Information is collected from many sources, including GDD centers, other CDC programs, WHO, DOD, USDA, USAID, Homeland Security, the

[1] The prepared statement of Mr. Arthur with attachments appears in the Appendix on page 203.

State Department, and Georgetown University's Project Argus, among others. CDC scientists analyze the information, determine the public health threat, and guide the appropriate level of response.

For example, CDC and other international partners are currently responding to an outbreak of Ebola in the Democratic Republic of Congo, DRC. In Collaboration with Argus, CDC began tracking reports of unexplained illness in DRC in late August and alerted WHO and other partners once this was determined to be a significant health threat. CDC has deployed a physician to provide an assessment of the situation and, with support from the CDC Global AIDS Program in Kinshasa, to guide a larger response. Shortly thereafter, on September 10, a CDC lab confirmed Ebola. CDC then deployed a response team comprised of nine scientists, and we continue to work closely with the Ministry of Health, WHO, and other partners to stop this outbreak.

During 2006, the GDD centers collectively responded to more than 144 disease outbreaks, including avian influenza, hemorrhagic fevers, meningitis, cholera, plague, and unexplained sudden death. CDC currently considers influenza to be the most urgent threat to human health. Bilaterally, and globally through WHO, CDC is providing support to over 40 countries to advance the capacity to detect influenza viruses with pandemic potential. CDC is one of four WHO collaborating centers for influenza. As such, CDC serves as a global resource and reference center for the WHO Influenza Surveillance Network. Between 2003 and 2007, CDC received 1,445 suspect avian influenza specimens through this system, of which 508 were positive, and also received nearly 20,000 non-avian influenza viruses through this network.

In addition, CDC has conducted numerous training programs to prepare rapid response teams in Africa, Asia, and Latin America. Since 2003, CDC has responded in two and helped contain many outbreaks of avian influenza globally, and all responses were initiated within the target goal of 48 hours.

CDC looks forward to continued collaboration with our partners to implement additional activities that will further enhance capacity.

This concludes my testimony, and I would be pleased to answer any questions you may have.

Senator AKAKA. Thank you very much, Dr. Arthur.

At this time, before I call on Dr. Smith, we are glad to have Senator Coburn here.

OPENING STATEMENT OF SENATOR COBURN

Senator COBURN. Thank you, Mr. Chairman.

Senator AKAKA. Do you have a statement you would like to make?

Senator COBURN. No. I may put a statement in the record. Thank you, sir.

Senator AKAKA. Thank you, Senator.

Dr. Smith, will you please proceed with your testimony?

TESTIMONY OF KIMOTHY SMITH, D.V.M., PH.D.,[1] ACTING DIRECTOR, NATIONAL BIOSURVEILLANCE INTEGRATION CENTER, CHIEF SCIENTIST, OFFICE OF HEALTH AFFAIRS U.S. DEPARTMENT OF HOMELAND SECURITY

Mr. SMITH. Certainly. Thank you, sir. Mr. Chairman, Members of the Subcommittee, I am Dr. Kimothy Smith, Acting Director of the National Biosurveillance Integration Center for the Department of Homeland Security. I appreciate this opportunity to discuss with you today the advances in the program and particularly the incorporation of global biosurveillance data and wild animal information into our biosurveillance products.

Our mission to leverage and integrate existing biosurveillance capabilities to provide early recognition of biological events of potential national significance was mandated initially by Homeland Security Presidential Directives 9 and 10. Additionally, the newly signed Public Law 110–53 further codifies our cross-domain, integrative biosurveillance mission and gives us clear guidance for our efforts.

Today I will provide a continuing vision for the NBIC, highlight for you the advances we have made, and provide you with the current status of the program. Additionally, I will address our integration and interface with sources of global biosurveillance and wild animal biosurveillance information. Last, I will mention the challenges that remain before us in this effort and my view for onward movement towards meeting the mandates the country has lain before us.

It is essential that I convey to you that NBIC is more than an information technology solution to the Nation's integrated biosurveillance challenge and is unique in both mission and breadth. The heart of the NBIC, though, is relationships between people and the agencies and organizations they represent. These are relationships vital to obtain access to the valuable, often sensitive, and sometimes classified information collected and used by the NBIC partners. NBIC does have and will continue to pursue relationships with personnel from a wide variety of Federal agencies and other relevant entities. We are developing relationships with various State intelligence fusion centers and with entities such as Georgetown University's Argus Project, which will be represented here today.

As for where we stand today, it should be noted that our center is operational today. Though not at its full operational capabilities, we have had a 24-hour-a-day, 7-days-a-week national biosurveillance watch desk up and working since December 2005, responding to real-world events. Facilities have been acquired and personnel requirements have been finalized, with two-thirds of our personnel requirements filled to date. Six significant Federal partners have already signed memorandums of understanding for mission support and integration with five others in an effort to best determine their abilities to contribute.

Interagency agreements and memorandums of agreement have also been developed for the integration of subject matter experts from both the Center for Disease Control and Prevention and the

[1] The prepared statement of Mr. Smith appears in the Appendix on page 220.

Armed Forces Medical Intelligence Center. These are just some of the significant advances I would like to highlight for you that our program has.

Currently, the acquisition process for our biosurveillance program is based on monitoring sources for significant information to be used in product development for dissemination to decision-makers and key stakeholders, and includes information that is global in scope. Key sources in use include government agency reports and open-source information, such as Argus, the Office International des Epizooties, or OIE; the Centers for Disease Control and Poverty Global Disease Detection Program—Ray Arthur sitting next to me; the World Health Organization; and the Department of Defense GEIS program, whom you will hear from in a moment, among others.

Another important function of NBIC is the integration of wildlife biosurveillance information as a potential key early indicator of bioevents. Government organizations like the Department of Interior, the Department of Agriculture, and the U.S. Geological Survey, along with such information networks such as the Global Avian Influenza Network for Surveillance (GAINS), that receives support from my colleagues here from USAID as well as CDC, as well as the International Species Information System/Zoological Information Management System (ISIS/ZIMS), all play a key role in monitoring and reporting what could be very early indicators of a significant bioevent by way of our wildlife.

To this end, we have clear interest in and intend on supporting, where possible, the ISIS/ZIMS efforts, as well as deepening our relationship with our GAINS colleagues for enhanced information sharing beneficial to the broader biosurveillance community.

Mr. Chairman and Members of the Subcommittee, as with any maturing program there are challenges. While continuing to move forward to meeting our goals, we are cognizant to keep a heads-up posture and maintain a broad vision with realistic assessment of the biosurveillance mission to assure success. We can achieve success in this critical mission with your support and that of our interagency partners and the members of the biosurveillance community, such as those testifying here today.

Thank you for your time, and I look forward to your questions.

Senator AKAKA. Thank you very much, Dr. Smith.

And now we will hear from Colonel Erickson. Will you please proceed?

TESTIMONY OF COLONEL RALPH L. ERICKSON, M.D., DrPH.,[1] DIRECTOR, DEPARTMENT OF DEFENSE GLOBAL EMERGING INFECTIONS SURVEILLANCE AND RESPONSE SYSTEM (DOD-GEIS), U.S. DEPARTMENT OF DEFENSE

Colonel ERICKSON. Mr. Chairman. Senator Coburn, Members of the Subcommittee, thank you for inviting me to speak with you today. I am Colonel Ralph Erickson, Director of the DOD Global Emerging Infections Surveillance and Response System, a program which is abbreviated DOD-GEIS.

[1] The prepared statement of Colonel Erickson appears in the Appendix on page 228.

The DOD-GEIS was created in 1996 by a Presidential Decision Directive that expanded the role of the DOD to address threats to our Nation and others posed by emerging and re-emerging infectious diseases.

DOD-GEIS has four goals, of which the first, surveillance and detection, is the primary area of concentration. Anchored by five robust overseas laboratories in Thailand, Indonesia, Kenya, Egypt, and Peru, the DOD-GEIS team operated in 77 different countries worldwide in fiscal year 2006 and fiscal year 2007.

Our efforts to improve outbreak detection including electronic surveillance systems which apply computer and information technology in places with very few resources. These systems are currently operational in Indonesia, Laos, and Peru. Other recent accomplishments of DOD-GEIS are these:

Our Rift Valley Fever risk prediction project provided us warning of the Rift Valley Fever epidemic in East Africa in September 2006, 2 months before the outbreak began. The Navy's lab in Cairo, Egypt, responded to influenza outbreaks in Iraq and Afghanistan. Not surprisingly, this same lab has become the WHO influenza regional reference laboratory for the Eastern Mediterranean region and is working in many countries in the Middle East and Central Asia. In all, DOD-GEIS partners are currently collecting influenza isolates at 273 distinct sites in 56 different countries. DOD-GEIS works closely with other U.S. Federal agencies who are also engaged in the surveillance of infectious diseases. Of note is the CDC–DOD Working Group.

To further enhance our integration of DOD-GEIS surveillance efforts globally, we have a military medical officer assigned to the World Health Organization in Geneva, Switzerland. Our DOD-GEIS network is replete with talented physicians, veterinarians, entomologists, and laboratory professionals drawn from all of the Uniformed Services where the culture of One-Health/One-Medicine is already well established.

As an example of this, since 2003, the Navy's lab in Cairo, Egypt, and the Army's lab in Nairobi, Kenya, have worked with the Centers for Disease Control and Prevention and host Nation regional partners to collect wild bird surveillance samples to detect circulating strains of avian influenza virus. Incidentally, our Navy lab in Egypt was the first to detect, diagnose, and confirm highly pathogenic avian influence, H5N1, in poultry in Afghanistan, Djibouti, Egypt, Iraq, Jordan, and Kazakhstan.

In conclusion, the Institute of Medicine, in a review of DOD-GEIS, described it as "a critical and unique resource of the United States in the context of global affairs." It is the only U.S. entity that is devoted to infectious diseases globally and that has broad-based laboratory capacities in overseas settings.

Again, Chairman Akaka, Senator Coburn, Members of the Subcommittee, thank you for this opportunity to present to you today. Thank you particularly for taking this issue of emerging infectious diseases so seriously.

I would be happy to answer any questions which you might have at this time. Thank you.

Senator AKAKA. Thank you very much, Colonel. Now we will hear from Dr. Hill.

TESTIMONY OF KENT R. HILL, PH.D.,[1] ASSISTANT ADMINISTRATOR FOR GLOBAL HEALTH, U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

Mr. HILL. Senator Akaka, Senator Coburn, thank you so much for convening this important hearing and inviting us to participate, and it is a privilege to be here with my colleagues from the other agencies with whom we work so closely on many of these issues.

My comments will focus on the work and vision of USAID, and I would first like to note that our programs strengthen surveillance systems by building developing country capacity to detect newly emerging diseases. Second, our programs focus on fully implementing both arms of the surveillance loop, that is, early detection and rapid and effective response. Third, recognizing the increased threat of diseases of animal origin, our programs are fostering critical links between human and veterinary public health. And, finally, interagency collaboration is absolutely vital to our work and the work of the USG to deal with these issues.

Diseases are not only significant public health threats, as has been noted; they jeopardize international commerce, development, and security. The estimates of the cost of SARS to the global economy is between $30 and $100 billion. As has been mentioned, the potential impact of an influenza pandemic similar to that of 1918 could take the lives of 50 to 100 million people and devastate the global economy for years.

Such outbreaks are capable of destabilizing governments. They increase the threat of international terrorism. In short, anything we do abroad to affect this affects the national security of this country.

USAID is in a critical position to help countries develop these capacities and has taken on this challenge through several of our programs targeting health system surveillance capacity. The GAO report released today captures some of the central efforts, such as our support for Field Epidemiology Training Programs and WHO's Integrated Disease Surveillance and Response (IDSR).

But in addition, I would like to mention that important contributions are also being made by our disease-specific programs. For example, since the mid-1980s, about $290 million has been expended by USAID on polio surveillance in approximately 40 countries, and as mentioned here already, some of those labs work on other diseases besides polio. They have impact elsewhere. One hundred and forty-eight national and regional polio laboratories and hundreds of medical surveillance officers have been trained.

But we also do work in tuberculosis and in HIV/AIDS and malaria. Although these are disease-specific initiatives, anytime you improve surveillance for specific diseases, you improve the capacity to detect and respond to other diseases. We have programmed $345 million to limit the spread of avian influenza and to prepare for a possible pandemic, and this is very important.

USAID and HHS and CDC are working together to support the African Field Epidemiology Network. USAID and CDC are also jointly developing a Field Epidemiology and Laboratory training Program in Nigeria that will be the first in Africa to integrate vet-

[1] The prepared statement of Mr. Hill appears in the Appendix on page 238.

erinary, laboratory, and field epidemiology training. We work with the military, obviously, on NAMRU in a variety of places. In fact, it is an excellent example of interagency coordination, with the surveillance work represented by the people before you today.

We work with important NGOs, such as the Wildlife Conservation Society, through whom we have helped to establish the Wild Bird Global Avian Influenza Network for Surveillance, which is also called GAINS and is tracking influenza in wild birds worldwide.

One of the most important lessons in human health of the last 30 years is the fact that the human population is facing an increasing risk from infectious diseases of animal origin. Of all the pathogens that infect humans, about two-thirds originated in animals—a sure sign that this has to be a focus of our work.

Several recent outbreaks of zoonotic diseases demonstrate that our investments really make sense. It was mentioned already this afternoon that in Eastern Africa, specifically, Tanzania, the response to a Rift Valley Fever outbreak this year could not have happened apart from work that was done on other topics, such as on avian influenza, which brought the Ministry of Health together with other ministries—the Ministry of Agriculture—in a way that they had not coordinated before. It helped them to early diagnose and respond to the outbreak.

Finally, let me just note that in the future what we need to do more of is study how we can scale up and more effectively work together. We have commissioned the Institute of Medicine at the National Academy of Sciences to convene an expert consensus committee to consider the challenge of achieving sustainable global capacity for surveillance and response to emerging zoonotic diseases. A full report will be released in 2008, and I anticipate the finding will guide programming for zoonotic diseases and enable us to be better prepared to make a difference in the future.

Thank you very much, Mr. Chairman.

Senator AKAKA. Thank you very much, Dr. Hill, for your testimony.

Dr. Arthur, despite our efforts to control emerging threats at the source, I understand that vaccine production can lead to the creation of even more dangerous forms of these diseases. China has an active vaccine research program for bird flu. They also vaccinated their chickens.

Is there any indication that China's vaccination research and vaccination of poultry contributes to continued mutations of the bird flu virus?

Mr. ARTHUR. Thank you for your question, Mr. Chairman. The use of animal vaccines is a little bit out of my scope of expertise. I would consult with some of the many veterinarians and the influenza specialists that we have in Atlanta and be glad to provide that additional information for the record.

Senator AKAKA. Well, thank you for that, Dr. Arthur.

The global disease surveillance and capacity-building programs we are discussing today have been around for several years. I am concerned that you are just beginning to evaluate the impact of these surveillance programs. Why has this taken so long? Dr. Hill.

Mr. HILL. Some of the programs that the GAO report noted are new and have not yet been evaluated. Some of the other programs, however, are much older, the polio programs, and our work in other diseases, which have been operating long enough that we have been able to do empirical studies to see if we have had an impact.

For example, the evidence on the number of polio cases is pretty startling. There were hundreds of thousands of cases in the late 1980s, compared to less than two thousand in 2006. So we know that the surveillance and the response to polio is working.

Even influenza is an interesting case. It is also very new. But we can tell that in places like Vietnam and other places in the region that what we are doing is making a difference. But we acknowledge that the fuller-scale evaluation is simply going to take a little time.

The United States is very disciplined about its reporting to Congress. We need to be able to promote results to make a difference.

Senator Coburn has been a fierce fighter for being able to show results in malaria. If you compare what we were doing a few years ago on malaria prevention and surveillance with now, the results are very encouraging. So when we put our minds to it, we can do a good job.

Senator AKAKA. Dr. Arthur.

Mr. ARTHUR. You are correct, some of the programs have been in existence for several years. The GDD Program attempts to bring these together so that the sum of the program itself is more than the individual parts, and to develop a long-term strategy to enhance the capabilities of all the programs.

Also, by having the GDD Program and these three programs already mentioned as a part of those, it increases our accountability, and we are able to develop monitoring and evaluation systems to assess the progress of these programs. As was mentioned by Mr. Gootnick, the evaluation was done for 2006. We now have that baseline. We will be starting our evaluation of 2007 activities in December, and we will be glad to share the findings of those with you early in 2008.

Senator AKAKA. Thank you.

Colonel Erickson, what has DOD done to evaluate the impact of GEIS for host countries?

Colonel ERICKSON. Mr. Chairman, we have learned a lot from our colleagues, especially some of those that are at the table, as to the proper ways to evaluate surveillance systems. In fact, there is one particular reference which we hold to which was published in 1988 and then republished in 2001, which actually sets forth the standards for evaluating a surveillance system, and I can get that for you. But it has some very practical advice in it. Is the system actually doing what it is called to do? Are the expectations being met? Is it sufficiently sensitive? Is it timely to be able to report back, etc.? Is it well accepted? In the case of our work, well acceptance would not be just the military but the host country, the community, the location at which the surveillance is going on.

In practice, the way we evaluate our programs, we have regular reporting requirements from our GEIS partners, which is something that we look at very closely, monthly reporting, quarterly, and annual reporting. In addition, we make field sites. I can tell

you that in my first year as the Director of GEIS, I visited all five overseas labs to conduct personally that very type of investigation and inspection.

In addition, we have outside external reviews which go on. In 2001, the Institute of Medicine published a book which you may be familiar with, which evaluated all of GEIS, and as Mr. Gootnick in his opening comments made mention to, the Institute of Medicine has just finished a new evaluation of our influenza surveillance programs. The pre-publication meeting for that was just this last week, and we are expecting that to hit publication in the next month, and I would be more than happy to make sure that you get copies of that.

Senator AKAKA. Thank you very much. At this time I would like to call on Senator Coburn for his questions.

Senator COBURN. Thank you, Mr. Chairman.

I have read the GAO report. How often do you all drill together—in other words, create a scenario that is not true but respond to it in a coordinated fashion? Anybody want to answer that?

Mr. HILL. I would mention that we are in the process of putting together a tabletop simulation—and tomorrow, in fact, I have a meeting with the group that is designing the simulation. We will be working with the same folks who put together for CDC, in Atlanta, a series of tabletop exercises on avian influenza. We are going to do it within the next few weeks here in Washington at the Assistant Secretary of State and Assistant Administrator of USAID level. And we are putting the final touches on that to work specifically on the avian influenza. That is the most recent one I know of related to this sort of activity.

Senator COBURN. And that will include all the rest of the gentlemen at this table?

Mr. HILL. Yes, I think it will include all the agencies and departments represented at the table.

Senator COBURN. OK. But we have not done that yet, right? We have not said, "here is a scenario, a false scenario, we have generated some type of practice, so that if we see another SARS or we see H5N1, do we know what we are doing and that it is going to coordinate?"

Mr. HILL. We actually are modeling this in part on what CDC has done several times already related to avian influenza, but we are bringing it to Washington to work on the agencies that are here.

Senator COBURN. OK. Do your IT systems communicate between the different agencies—DHS, CDC, USAID, Department of Army? Do you all have effective communication of your data links?

Mr. SMITH. Sir, I find that an excellent question. I really do. And I am going to be the first one up to the plate here to say that, looking toward the future, I think that they absolutely must. I find that Health and Human Services and the Centers for Disease Control are taking the lead with the Office of National Coordination and with the National Center for Public Health Informatics, and setting a standard for a Federal health architecture, setting a standard for the National Health Information Exchange. We, at the Department of Homeland Security, are involved in those activities and making sure and certain that our IT systems that are involved, particularly

with biosurveillance, are compliant and will be able to exchange information.

Senator COBURN. So, in other words, the answer to the question is the biosurveillance data now are not compatible from agency to agency.

Mr. SMITH. Sir, I would not say that is true across the board.

Senator COBURN. Well, but it is not totally compatible so that the data you have and the analysis you have are available to all the other groups that we are depending on for biosurveillance.

Mr. SMITH. I would have to say that across the board that is correct, sir.

Senator COBURN. DHS is really at the center of this. Do you all have a program that coordinates right now the integration of data? Or is that what you were speaking to, you are developing that and planning on having that, but you do not have a coordinated, integrated program right now so that everything could feed to DHS?

Mr. SMITH. Sir, that is correct. That is what we are in the process of developing now.

Mr. HILL. But, Senator, I should probably mention that the agreement between CDC, HHS, USAID, and others has been to facilitate WHO as the center for collecting much of this information with respect to our international programs. And so there has been a lot of work that has been put into making sure that systems are in place, that we will flow through WHO a lot of this information. So there is an attempt——

Senator COBURN. OK. Well, that is great. So we do have one place. Do you all have access to all the data that flow into WHO?

Mr. HILL. As far as I know, the information we share, the whole point of that is information——

Senator COBURN. To get a coordinated response.

Mr. HILL. Right.

Senator COBURN. But does every other group on this panel have access to that information, that we have shared in total?

Mr. HILL. The international health regulations, which WHO has been working on and we are trying to get as many countries involved in as possible, the whole requirement of that is that people get the information or countries get the information to WHO. The expectation or the requirement is that WHO get it back to the rest of the globe in the appropriate way so that the information is useful. Whether all the countries are——

Senator COBURN. Well, I am not really concerned about the rest of the countries. I am concerned about what we are doing and what we are collecting and what we are trying to create in terms of surveillance capability outside of this country. Do we have the IT capability to know what that is if we put it in and—I know we are building that at DHS, but what we give up and goes to a centralized collection point, does everybody have access to that now?

For example, if your computers cannot talk to DHS but you both can talk to WHO, can Dr. Smith get the information that you have computed to WHO and bring it back to DHS?

Mr. HILL. I would need to get an authoritative answer on that, but I believe the answer would be yes. I think anything that we could communicate to WHO we would certainly be able to communicate to each other.

Senator COBURN. Should we have had WHO representatives here today, especially our delegates to WHO? And could we maybe ask them some questions on the basis of what we are finding here today and get their input, because that would have been probably helpful to see what their input is since they know what that is.

Colonel ERICKSON. Senator Coburn.

Senator COBURN. Yes, sir.

Colonel ERICKSON. If I could just weigh in, in terms of more perhaps pedestrian IMIT capabilities, we use computers and e-mail and push data, use VTCs, telephones, etc. DOD has a very close working relationship with CDC to the point where we are sharing reports, we are sharing isolates. We, in fact, use them as sort of our Supreme Court where we send those isolates for further confirmation and for selection of isolates for, for instance, vaccine development.

Within the WHO, as I mentioned in my earlier comment, we have a military medical officer who is assigned there full time who provides that link to much of that information. In addition, we are a member of the Global Outbreak Alert Response Network (GOARN), which also provides a forum for getting that information out to the different agencies, many of those represented here.

And so there are good systems in place. We can do better, certainly, that you are alluding to, but I would not want to leave you with the impression that we are not——

Senator COBURN. I know you have the capability to communicate, but the problem we have across the government is we have stovepiped IT programs that very much limit the capability of accessing people who need to know and can utilize the information that is easy.

Colonel ERICKSON. Sure.

Senator COBURN. And that is one of the goals. We spend $65 billion a year in this country on new IT programs, of which $20 billion gets wasted every year. And so this is an important area. If we are going to allow you to be more efficient and functioning better, what we have to do is make sure that everybody's goal is to eventually get to where we can talk to one another through our computers, analyzing data, so we do not have to buy new programs so that one computer can talk to another computer. That was the purpose for the question.

The GAO identified several weaknesses within DHS. One was there has not been consistent leadership at DHS for this program, and that is probably a legitimate criticism, and that is no reflection on you whatsoever.

Does DHS have a plan with metrics and milestones for addressing the weaknesses that GAO identified in their report?

Mr. SMITH. Yes, sir, we do.

Senator COBURN. And is that plan available to this Subcommittee?

Mr. SMITH. Certainly it will be.

Senator COBURN. OK. Well, I would very much appreciate a copy of that.

I just have one other comment, Mr. Chairman, and then I have to go to the floor to offer some of my dreaded earmark amendments

so that we can get money to run the government instead of run the politicians.

I think back to the SARS outbreak. We did not get a handle on that until we stopped commerce. Under the threat of the stop of commerce did we get compliance. And our goal has to be to get where we do not have to go to that level. And I know that is what the goal is in terms of trying to build surveillance teams and everything else.

Would any of you care to comment on how we could have done that better and not wasted the time where we finally had WHO issue a travel ban to get compliance out of a foreign country who at first was denying that there was an epidemic—in other words, what it did is more people died because of the denial that there was a problem. What can we do as America—we cannot imfringe on the sovereignty of other countries, but can we work better and can we bring to bear forces sooner so that we get the proper reaction? And I am talking all types of leverage—suspension of aid, all these other things—to get people, when they have the resources and know how to do it, to actually report it. Any comments? Yes, sir, Dr. Arthur.

Mr. ARTHUR. That is exactly the intent of the International Health Regulations, which came into force for the United States in July of this year. There had been a 10-year process to revise those regulations and move away from a list of three diseases to a concept of identifying a particular health threat so that it would account for new entities such as SARS or the next unknown disease that may occur.

Senator COBURN. And in your position at CDC, do you feel pretty comfortable that we are going to see—because of the new regulations, we are going to see much greater coordination because of those?

Mr. ARTHUR. I think the international political pressure will increase dramatically since under the new International Health Regulations, WHO could have gone to China in December when I was in Geneva and first knew about these reports several months before it became publicly known—this was in 2002—go to China under the new International Health Regulations and say, look, another member state has reported that they see this event, you are required under the International Health Regulations to respond in 24 hours and provide that information. If China then does not do so, then WHO would use other political pressures, other countries and so forth, which now have signed—all 193 countries in WHO have agreed to accept the International Health Regulations—then would be in a position to leverage tremendous international pressure on China to do the right thing. China, as a signatory to the IHR, they would be required to respond to that.

Senator COBURN. And so what are the actual teeth of that response? If they fail to respond, what are the teeth? They have signed an agreement. They are not complying with the agreement.

Mr. ARTHUR. The IHR unfortunately does not have any punitive or penalty assigned to it, so WHO is not in a position——

Senator COBURN. So, therefore, it is going to require courage on the part of the people leading WHO to do a travel ban early, to threaten those things.

Mr. ARTHUR. Right. But the information also will be disseminated internationally to all the other countries saying that we have this situation in China, we have asked for information, we do not know what is going on. The WHO Director General, if she determines the event to be a public health emergency of international concern, has already a pre-rostered committee that would advise her on the recommended measures that she needs to take, and it could include travel bans, it could include travel restrictions, whatever. But this would be the international community that would be dealing with the problem.

Senator COBURN. But you would agree the thing that got action was the travel ban on that? When that was issued, they started cooperating. Is that correct? I mean full-fledged cooperation. When there was a travel ban issued by the WHO, what happened? All of a sudden we had admission there is a problem and help. Right?

Mr. ARTHUR. They were very closely timed with each other, yes.

Senator COBURN. Yes, all right.

Thank you, Mr. Chairman. Thanks for holding this hearing.

Senator AKAKA. Senator Coburn, just to answer your question about WHO, it is not that we have not thought of them, but we received the message that, for whatever reason, they would not testify before Congress.

Senator COBURN. Actually, I was wanting our members that come from our country to WHO to testify, not WHO. In other words, our delegates, because they represent us there, and I am certain that we can ask them questions—I would hope. It is not surprising that a lot of international agencies are not very transparent and responsive to some of the demands of Congress, even though we contribute about 25 percent of all their funding.

Thank you.

Senator AKAKA. Thank you very much, Senator Coburn.

My question is to Dr. Hill, Dr. Erickson, and Dr. Arthur. The programs you have summarized in your statements describe surveillance of known diseases. But what about diseases we have not seen before? It took many weeks for human and animal health experts to figure out that it was West Nile virus, a disease not previously seen in the Western hemisphere, that was killing the birds and people in 1999 in New York City.

Can you give us assurance that your surveillance systems can help to identify and monitor new or emerging diseases that have not been seen before in this country? Dr. Hill.

Mr. HILL. I think the first thing I would say is it would probably be a question almost like a puzzle—the process of elimination. If you have the right labs set up globally and you know you have got a problem, there is an outbreak of something that is killing people with high fevers, etc., the most obvious thing, of course, to do would be to test for the known likely possibilities.

If all those tests come up negative, in the sense it is clearly not what it is, it is obviously something else. Will that tell you what it is necessarily? No. But it will at least tell you that you have got a problem that you better address pretty quickly.

As I understand it on HIV, one of the big problems was we did not pick up years, maybe even decades, before that something was going on, that had we known or had our surveillance systems been

more sensitive, we might have responded much quicker and perhaps have stemmed the tide. But we did not even realize or pick it up.

But you cannot do anything if you do not have the labs in place to test for the known possible problems. If you have that, then you have at least a chance to know that you are dealing with something new.

Senator AKAKA. Dr. Erickson.

Colonel ERICKSON. Mr. Chairman, your question is an excellent one, and it is one that we frequently will discuss among ourselves. We have different aspects to our surveillance efforts. The syndromic surveillance, which we do in a number of areas, is not dependent upon a lab test. It is not dependent upon having actual diagnostic tests to know what something is. We can use case definitions, syndrome constellation of symptoms to determine that there is something going on, there is something new. It might look like diarrhea, it might look like a respiratory disease, it may have a high fever, etc. And that is the first indication of what we can do.

If I can add to Dr. Hill's comments, the response can start at that point. For instance, in the case of SARS, the response was started in advance of there being diagnostic capability to realize that it was a coronavirus. And so my encouragement is that we continue to focus on an approach which builds broad-based laboratory capability, which enables us to have a sufficient number of public health practitioners, epidemiologists, etc., build this human capacity so that we can respond with the bread and butter, tried and true public health responses that will be somewhat generic for many of these new types of threats, realizing that we need the lab capability, we will need to finally know through molecular microscopy, through genetic sequencing, etc., that it is something new, that we are now going to call it virus X. But the response can start before that, and so I think building the broad public health infrastructure at this point is key, because we will not necessarily know—I cannot tell you, sir, that we are absolutely ready to be able to diagnose something that is new because we will not necessarily know. We will have to be responding before we know.

Senator AKAKA. Thank you. Dr. Arthur.

Mr. ARTHUR. I would like to add one additional aspect. I think one of the key elements and one of the things that we are very sensitive to and invest a considerable amount of effort at CDC, particularly in the Global Disease Detection Operations Center, is to look for those events which are unexplained, unexpected, unusual, and to use—instead of conventional surveillance systems with reporting systems, particularly in international settings where those types of infrastructure do not—that infrastructure both for reporting and laboratory diagnosis do not exist, using media reporting and mining of news reports. And you will hear later this afternoon about a project, Project Argus, from Dr. Wilson at Georgetown University.

These reports, while they are very non-specific and often require verification, are incredibly important as a first alert for something unusual happening, something that needs further investigation, and then it can be followed up with the appropriate laboratory studies, etc.

But it turns out that in resource-poor countries in many parts of the world, the press report or the reporter is one of our best surveillance officers. They are highly motivated to provide this information, and it gets disseminated very broadly, and we focus on picking up those early signals.

Senator AKAKA. Thank you. As you know, because the Chinese Government was not forthcoming in reporting cases of SARS and avian influenza, these diseases spread more widely and more quickly.

Are you considering incentives to encourage countries to report these diseases before they become pandemics? Mr. Gootnick.

Mr. GOOTNICK. Well, I would refer back to the earlier conversation on the International Health Regulations, which, amongst other things, is a politically binding document, creates an international norm, and is intended to facilitate an international response. It is important to recognize that the International Health Regulations, while they were adopted by the World Health Assembly in 2005, have really just now entered into force in 2007, and there is a phase-in period that really takes us out to 2012 before there is really a full implementation and binding set of agreements and expectations that the ability to intervene on the part of the international community is implemented.

And then, even at that, the resources for countries who are motivated to take the steps dictated by the International Health Regulations are, at the beginning at least, the obligation of those sovereign nations.

Senator AKAKA. Thank you. Dr. Arthur.

Mr. ARTHUR. I think one of the incentives that we can provide to countries is building the capacity for them to be transparent and feel comfortable in doing so about an event. If something bad is happening in their country, frequently countries do not report because it is associated with some economic impact—loss of trade, tourism, whatever. By providing countries with risk communication skills so that they feel comfortable talking to their populace about a particular problem, knowing how to say, yes, we have a problem in the country, knowing that we have someone standing beside us, whether it be WHO or another country that is providing assistance, it is not good news, but we are doing something about it and we are attempting to do something about, having resources available to support epidemiologic investigations and laboratory investigations and appropriate interventions from the international partners also gives the country some confidence then that they are more willing to go forward with the information because they are actively doing something in the eyes of the global community to contain the event; and, more importantly, they are helping their own populace and their country.

Senator AKAKA. Dr. Smith.

Mr. SMITH. Yes, sir. Certainly, we are considering incentives that we might offer, and the Department of Homeland Security might have a little bit different take than the other agencies represented here at the table. The exchange of information or information sharing that might not otherwise happen from the integration of biosurveillance information, perhaps not at the WHO level but at a different collection level, the sharing of best practices, and some of

these will branch out into non-traditional means. Certainly, as Dr. Arthur has mentioned, there are not necessarily health care workers or the public health infrastructure to report up, examination of non-traditional sources of information. DHS is involved in the trilateral talks and negotiations for counterterrorism and presenting the integration of law enforcement and public health and agriculture and how that exchange of information can actually facilitate reporting and awareness in rural areas or outside of metropolitan areas.

Senator AKAKA. Colonel Erickson.

Colonel ERICKSON. Mr. Chairman, I just would want to say that I wholly agree with my colleagues here in other comments already made. My sense is this issue of getting to transparency involves a cultural change, and though we can look for incentives in the near term, I think we are looking at a generational effect. And that is the reason why I think many of our programs have training components in them, where, in fact, we are training the next generations of laboratorians, epidemiologists, public health officials to step into a culture where reporting will not be punished, where bad news will not be received and bad things will happen to you because you are the one that is reporting.

But that is, in my mind, a cultural change that we need to effect through these many efforts that you are hearing about today.

Senator AKAKA. Thank you. Dr. Hill.

Mr. HILL. Just to summarize, I think there are four ways to incentivize the kind of reporting you want. I will start with the most negative first. Most countries want to be a respected member of the international community, but I think that should not be our first line of defense. Negative publicity does have an impact sometimes.

Also, second, if we make it very clear that when countries do the right thing they will be welcomed into the international community, that is a big deal, frankly. And if you think what happened last year at the major Beijing conference where China was the international host for a big international conference to raise funds for avian influenza, at which was discussed how do you avoid the kind of thing that happened with SARS, I think it was very significant that China was willing to take the lead in hosting such a conference. So they clearly want to be a part of something that works better than what happened during SARS.

And then, third, it has been mentioned, but I think it needs to be mentioned again: the promise that if you share information you are going to receive information is a powerful incentive to be up front.

And, finally, if there is some sense that if you report a problem you are going to be helped, the international community will help you deal with it, is significant.

And one last point that relates to the last question. Sometimes we get in the habit of thinking everything has a technical silver bullet, and I was the one that talked about the importance of labs, and I believe in the importance of labs. But even if the lab is present, the best labs in the world may not be able to identify a new problem. We still do not have a solution to HIV. We do not

have an HIV vaccine. But we know how to prevent it. We know how to contain it.

If on the front lines globally out in the rural areas we do a much better job of communication so that people know what they should look for, what they should report immediately, and those people take the right action, you can quarantine immediately. You can quarantine several square kilometers and avoid a problem. That does not require a technological bullet solution.

So there is an awful lot that can be done short of the solutions we hope are down the road that will control a lot of this much better than in the past.

Senator AKAKA. Well, I want to thank you very much. That is a good summary, I think, of this panel. I want to thank all of you for your valuable testimony. I look forward to working with each of you to ensure that we are aware of potential emerging diseases and the threats that could impact the United States. And I would ask that our second panel of witnesses then come forward, but we may have questions from other Members of this Subcommittee that we will submit to you for your responses.

So thank you very much for your testimonies and your responses.

We welcome the second panel to our Subcommittee hearing: Dr. Nathan Flesness, Executive Director, International Species Information System; Dr. Daniel Janies, Assistant Professor, Department of Biomedical Informatics, Ohio State University Medical Center; and Dr. James Wilson, Director, Division of Integrated Biodefense, Imaging Science and Information Systems Center, Georgetown University.

Again, it is the custom of this Subcommittee to swear in all witnesses, and so I will ask you to rise and raise your right hand. Do you solemnly swear that the testimony you are about to give this Subcommittee is the truth, the whole truth, and nothing but the truth, so help you, God?

Mr. FLESNESS. I do.

Dr. JANIES. I do.

Dr. WILSON. I do.

Senator AKAKA. Thank you. Let it be noted in the record that the witnesses answered in the affirmative.

Mr. Flesness, will you please proceed with your statement?

TESTIMONY OF NATHAN R. FLESNESS,[1] EXECUTIVE DIRECTOR, INTERNATIONAL SPECIES INFORMATION SYSTEM (ISIS)

Mr. FLESNESS. Thank you, Chairman Akaka, and thank you for this opportunity to testify on the infectious disease surveillance role our unprecedented new Zoological Information Management System (ZIMS), can play for the United States and other countries. It is an honor to be asked to appear and valuable to learn from other members of both panels.

The International Species Information System (ISIS), is a 34-year-old, U.S.-based nonprofit of international scope. ISIS has spent three decades building a worldwide network of 700 zoos and

[1] The prepared statement of Mr. Flesness with an attachment appears in the Appendix on page 246.

aquariums which pool detailed animal data on 2 million specimens of 10,000 species. Maps and lists of our members are attached to my written testimony.

We currently cover facilities in 73 countries on all six occupied continents. This includes 263 ISIS member zoos and aquariums in 47 States of the U.S. ISIS is by far the world's largest membership organization of zoos and aquariums and continues to grow.

For example, the Indian Government has just announced they will sponsor 59 Indian zoos to join ISIS next year.

Honolulu Zoo Director Ken Redman sends his regards to you, Chairman Akaka, and would welcome the opportunity to show you how his zoo will use our new ZIMS system to connect to other zoos worldwide.

After several years of fundraising and software development, we are now testing this profound transformation in our capabilities. Our new Web-based, real-time software, ZIMS, will replace our older systems, be online sharing information among our members, and keeping watch for zoonotic infectious diseases.

Avian flu is, of course, the current concern, and ZIMS will include powerful worldwide monitoring for the different strains of avian influenza. But ZIMS will be equally powerful for detecting the next disease threat and the ones that will come after that. This is a long-term permanent effort to develop both situational awareness and an early-warning system for all zoonotic diseases.

In fact, if you were going to imagine an ideal zoonotic disease biosurveillance system which could help stand watch in countries around the world, in my mind it would monitor thousands of species of animals, daily or hourly, to be sure to include vulnerable hosts for any threatening disease. It would use already trained and paid veterinary wildlife professionals for this monitoring. It would monitor animals in hundreds of urban centers worldwide where, in fact, most humans are. It would have already established broad international data-sharing cooperation and a culture of trust. It would have all data on the Web in real time. It would have enormous detail, such as vaccination history of each specimen stored serum samples, and so on. And it would be primarily privately supported.

Of course, the system I am talking about is the one we are finishing called ZIMS. After 3 years of design and development, it is now in testing and will roll out worldwide starting July 2008.

You have already noted, Chairman, that the zoo community has demonstrated its considerable power to spot new and emerging diseases with the story about West Nile virus. With ZIMS, they will be able to do so even more rapidly in real time.

When the next human pandemic outbreak happens, it will come from and affect animals. It may be a disease we have already worried about, or it may be one we have never noticed before. ZIMS will give countries around the world valuable additional power to spot the next threat early, whether it is an old or a new disease.

To make this real, consider the following hypothetical scenario. On a Thursday morning, an animal keeper named Susie Chi, working at a Southeast Asian zoo, makes her morning rounds and observes with concern that the leopards in two different exhibits look ill. She radios the veterinarian, Dr. Paulo, and stops by her desk

to enter these observations into ZIMS. Receiving the call, Dr. Paulo checks ZIMS for the best anesthesia drugs and doses and then does a hands-on physical. He draws blood samples and orders the animals moved to the hospital. His assistant enters the data into ZIMS while Dr. Paulo does some preliminary blood work. He sees anomalies he does not recognize and sends the sample by courier to the local university lab.

Dr. Paulo then searches in ZIMS to see what problems other ISIS members have with leopards recently. He notes one very recent and troubling case of a similar problem of unknown cause reported a few days earlier. Over the next few hours, Dr. Paulo sees in ZIMS that a nearby zoo is now reporting similarly ill leopards and, more alarmingly, problems with other big cats.

By the close of this first day, the ISIS–ZIMS epidemiological scanning program automatically detects an unusual pattern of animals becoming ill within a short time in the same geographical area. An ISIS staff veterinary epidemiologist is automatically alerted. She calls Dr. Paulo and confirms there are grounds for concern and learns the disturbing fact that both of the animal keepers involved have just called in sick. She advises Dr. Paulo on local useful governmental, CDC, OIE, and WHO contacts and triggers an alert to ISIS partner agencies. Less than 24 hours have passed since that first animal was noted sick on the other side of the world.

To develop ZIMS, ISIS had meetings with the World Organization for Animal Health, the new European Union CDC in Stockholm, CDC Atlanta, Homeland Security, and other agencies. They have helped us see just how unique and powerful ZIMS will be. No one has ever built an internationally adopted, computerized, lifetime medical records system for humans or animals before. To our surprise (to be honest), ISIS–ZIMS seems to be the first.

We have built ZIMS mostly with private funds, primarily from our member institutions. Currently, we are working with NBIC officials to design a framework for sharing ZIMS data and are cooperating on standards and compatibility. We look forward to NBIC's support for ZIMS training and rapid rollout to 25 major U.S. metro areas in key sites abroad. We are also hoping for NBIC's support to hire staff to watch for and interpret data patterns, and we hope to borrow the disease detection algorithms.

While ISIS currently has robust global coverage, we are also seeking an additional $2 million a year to cover far more institutions and cities in Latin America, Asia, and Africa, and be online standing watch in those regions.

A couple of points to leave you with in closing. As you have already noted, it is experts in our network who are finding diseases such as West Nile virus early. It takes decades to build the broad cooperation we already have. ZIMS is mostly privately funded and represents a $25 million investment. ZIMS offers the Federal Government an enormous opportunity to leverage private sector capability with a modest Federal investment and add an additional, effective, global zoonotic disease surveillance system to our pandemic defenses quickly. Thank you very much.

Senator AKAKA. Thank you very much, Mr. Flesness. Now we will hear from Dr. Janies.

TESTIMONY OF DANIEL A. JANIES, PH.D., ASSISTANT PROFESSOR, DEPARTMENT OF BIOMEDICAL INFORMATICS, OHIO STATE UNIVERSITY MEDICAL CENTER

Dr. JANIES. Thank you, Chairman Akaka. I am an Assistant Professor in the Department of Biomedical Informatics at the Ohio State University. My current research concerns the global spread of emergent infectious diseases. This work involves the use of large-scale computations on genetic and geographic data derived from viruses and their hosts, both animal and human. I received a Bachelor of Sciences degree in biology from the University of Michigan and a Ph.D. in zoology from the University of Florida. I worked as a postdoctoral fellow and a principal investigator at the American Museum of Natural History in New York City where, with funding from NASA and the city, we built one of the largest computers used in biological research.

At Ohio State and the museum, we are using public databases of genetic sequences from viruses isolated from human and animal hosts. Just as deciphering an enemy code can provide warning of an attack, we are decoding the genetic sequences of emergent viruses in order to protect our citizens and food supplies.

We are interested in genetic codes such as mutations that confer drug resistance among viruses and permit viruses that were once restricted to animal hosts to infect humans. With funding from DARPA, we have created a computational system to rapidly compare genetic sequences and return a global map depicting the spread of viruses carrying key mutations over hosts, time, and geography.

As demonstrated by the success in stopping SARS, the rapid collection and dissemination of sequence data throughout the research community are key components in the fight in emergent diseases. Decision makers and the research community must work together to translate raw data into actionable knowledge. We have developed the information technology to track the stepwise movement of diverse strains of viruses over different countries and among various hosts. We monitor the spread of dangerous strains of viruses that are resistant to drugs or are able to infect human and animal populations. Regional threats are forecast based on the distribution of these dangerous strains with respect to population centers, farms, and areas of military deployment.

As we scale our computational infrastructure and staff, we are able to rapidly add new data on a variety of agents of infectious disease and generate knowledge on which preemptive measures are important. Our maps, as depicted in this graphic here, are useful for understanding the complex mixture of processes that spread disease in various regions. For example, in Indonesia it is clear that chickens are responsible for spreading avian influenza—in this map, chicken-hosted viruses are depicted in blue lines—whereas in other areas, such as Central China, migratory birds are important. In this graphic, strains of avian influenza that are hosted by ducks and other migratory birds are depicted in red lines.

However, illegal trade is also a concern. There was an interesting case in 2004, where an eagle infected with avian influenza was smuggled from Thailand to Belgium. While this infected eagle was quickly confined and the virus did not spread at that point, that

case appears as a clear anomaly in our map, betraying an instance where illegal trade allowed avian influenza to make a huge geographic leap. I would like to turn your attention to the large green line showing the strain of avian influenza infecting the smuggled eagle is actually related very closely to Thai strains, and the geographic reach of that line is anomalous with respect to the other lines. Anomalies such as this provide means to detect illegal trade processes carrying avian influenza.

Furthermore, using methods we have developed, we can detect and visualize gaps in the available data that represent undersurveyed regions or underreporting. Even though we have made tremendous analytical advances, a significant portion of the data on avian influenza remains in private hands. Among the reasons for the lack of data sharing include the career aspirations of scientists who want first crack at the data and the interests of nations to assure that their citizens will have access to vaccines.

In light of the severity of the health and economic issues surrounding influenza, we have tried to change the model for data sharing via collaboration and co-authorship with international colleagues who work in the field and are providers of key viral strains for sequencing. These efforts have been exemplified by the Influenza and Coronavirus Genome Sequencing Projects, who are funded by the NIAID under a mandate to share data within 45 days of collection.

I realize that data-sharing issues are complex and that a balance of competition and collaboration is natural, both in science and international relations. We will use the data security concepts that have been developed to protect the privacy of patients while allowing clinical research to move forward in the context of data sharing on emergent diseases.

For example, cancer research is currently being accelerated by a data-sharing and analysis initiative of the NCI called the Biomedical Informatics Grid. We will apply the same underlying software for analysis and mapping of infectious diseases.

Mr. Chairman, I am pleased to have had a chance to discuss these issues with you today and I welcome questions.

Senator AKAKA. Thank you very much, Dr. Janies. Dr. Wilson.

TESTIMONY OF JAMES M. WILSON V, M.D.,[1] DIRECTOR, DIVISION OF INTEGRATED BIODEFENSE, IMAGING SCIENCE AND INFORMATION SYSTEMS (ISIS) CENTER, GEORGETOWN UNIVERSITY

Dr. WILSON. Good afternoon, Mr. Chairman. I appreciate the opportunity to testify about Project Argus, the biosurveillance priming system developed and implemented at Georgetown University's ISIS Center. Argus is designed to detect and track early indications and warnings of foreign biological events that may represent threats to global health and national security. Argus serves a "tipping function" designed to alert its users to events that may require action, but it does not determine whether or what types of actions should be taken.

[1] The prepared statement of Dr. Wilson appears in the Appendix on page 254.

In the summer of 2004, the Intelligence Technology Innovation Center (ITIC), and the Department of Homeland Security funded our research and development of a foreign biological event detection and tracking capability called Argus. Argus is based on monitoring social disruption. Local societies are highly sensitive to perceived emergence of biological threats, and the resulting conditions and responses are readily identifiable through a granular review of local sources of information.

Argus specifically focuses on three types of indications and warnings: Environmental conditions conducive to outbreak triggering; reports of disease outbreaks in humans or animals; and markers of social disruption such as school closings or infrastructure overloads.

The system is built on advanced operational social disruption and event evolution theory; unique disease event staging and warning; a defined doctrine of biosurveillance; real-time, high-performance Internet technologies; advanced modeling and linguistics capabilities; visualization and modeling capabilities; and disease propagation modeling.

Argus analysts focused on identifying trends in disease and on social behaviors associated with such events and are accessing over a million pieces of information daily worldwide. They produce, on average, 200 reports per day. Using a disease event warning system modeled after NOAA's National Weather Service, we issue on average 15 advisories, 5 watches, and 2 warnings at any given time, with 2,200 individual case files of socially disruptive biological events maintained and monitored daily in over 170 countries involving 130 diseases affecting animals or humans.

To facilitate operational validation, we initiated an unofficial Biological Indication and Warning Analysis Community (BIWAC), which reviews our reporting requirements quarterly to ensure proper product alignment with the user. The BIWAC now includes CDC's Global Disease Detection team, whom you have heard from today; USDA's Centers for Epidemiology and Animal Health; DHS' National Biosurveillance Integration Center; the Armed Forces Medical Intelligence Center; other Intelligence Community organizations; the Defense Threat Reduction Agency; and the U.S. Strategic Command Center for Combating Weapons of Mass Destruction.

To enhance this process, we activated a new Internet portal, Project Wildfire, where Argus-derived warnings and watches are posted to facilitate unclassified dialogue among the BIWAC partners. Wildfire, although experimental, has attracted a substantial amount of Federal use. The Argus Watchboard has an audience from 100 organizations, including State of Colorado officials and the DC Department of Health.

There is a significant degree of uncertainty surrounding biological event indications until ground verification has been obtained. Time is critical, and developing an approach to integrated, federally facilitated ground verification is important.

As examples, Argus has served as the lead tactical global event detection team for H5N1 avian influenza; provided daily situational awareness reports to tsunami-related humanitarian responders; notified the U.S. Government of undiagnosed vesicular disease in cat-

tle in the United Kingdom, later diagnosed as hoof-and-mouth disease; and reported indications of the current Ebola epidemic in the Congo.

Eight months ago, the Argus team identified hundreds of reports of an H3N2 influenza virus that has possibly drifted away from the current vaccine strain and collaboratively worked with CDC to track this important finding. The value of this information was validated when the WHO and its partners recommended a change in the Southern hemisphere influenza vaccine to include an updated H3N2 strain.

Argus reached full operational capability in July 2007, but there are challenges ahead. Funding for Argus is currently secure only through July 2008. We hope that you will agree that Argus should be maintained well beyond that date.

This global biosurveillance resource needs to be operational within the United States. Because of our funding source, we are prohibited from monitoring domestically. DHS recently issued a sole-source request for a proposal to initiate work on Project Hyperion, but it has not yet been funded. That needs to happen.

There remains an important need for continued enhancements of Argus. The methodology can be made sensitive to nuclear, radiological, chemical, terrorist, and natural events. Also, the current Argus network does not fully incorporate wildlife disease outbreaks; therefore, we have approached the Wildlife Conservation Society.

Finally, decisions need to be made about dissemination of Argus-generated information.

Thank you again for this opportunity to testify. I stand ready to answer any questions you may have.

Senator AKAKA. Thank you very much, Dr. Wilson.

What steps do you think should be taken to better integrate human and animal emerging disease surveillance? Mr. Flesness.

Mr. FLESNESS. Thank you, sir. I think, sir, that meetings like this that happen informally behind this podium, where the people with various parts of the solution could work together and be encouraged to combine those efforts would be extremely productive.

Senator AKAKA. Thank you. Dr. Janies.

Dr. JANIES. I concur with Mr. Flesness. I think the common framework we have developed in using genetic data is actually very important, because the viruses do not care if they are infecting humans or animals, they are just DNA ORRNA hitching a ride across different organisms. Thus a genetic approach provides commonality. Similarly we are using an open-source solution for sharing data. Much like HTML is interoperable on all Web browsers, we are using KML, a language for sharing geospatial data, which is interoperable throughout all geospatial browsers such as used by Argus.

Senator AKAKA. Dr. Wilson.

Dr. WILSON. Sir, I am in vigorous agreement with the prior answers that have been given here. Networking is critical. Collaboration is critical. We cannot function in a vacuum at Argus. As powerful as this capability is, it is useless without collaboration. And I hope that you will see, too, that even with the panel here today, everyone has a unique competency, a unique skill set that is being

brought to the table. The world of biosurveillance is beginning to speciate, if you will. There are a lot of unique expertise and disciplines and competencies evolving that all have to work together, a lot of different parts to a well-tuned engine, so to speak.

So we have to work together and we have to drop any kind of stovepiping mentality, in the interest of the mission.

Senator AKAKA. Thank you, Dr. Wilson.

Mr. Flesness, how can ZIMS be useful to NBIC? And how do you believe DHS can use ZIMS data to identify and dissipate the emergence of new diseases that are transferred from animals to humans?

Mr. FLESNESS. Thank you, Mr. Chairman. I believe that ISIS' new ZIMS system can help NBIC by providing, as it were, an extra layer of information focusing on incredibly intensively watched animals located primarily in urban centers with a little bit of diffusion because of the interests and projects of the veterinarians that work with the zoo animals that are often involved in wild animal projects outside the city. That gives us sort of a fuzzy dot in 700 cities around the world, and I think detecting both syndromics early on—because we have a very rapid response system since it is real-time—and, second, as the cases develop and there is more and hard information available, and the fact that we have a culture of sharing already established, we think we have quite a resource and quite a unique international resource to help NBIC and hopefully its equivalents in other countries around the world make sense of and confirm patterns of data provided to them.

Senator AKAKA. Thank you.

Dr. Wilson, you mentioned some of the governmental consumers of data collected by Argus. It seems that the information you collect and analyze would be valuable to a broader spectrum of users, including those at the State and local levels and the public health community.

Are there any plans to expand access to Argus information and, in particular, the similar reports of your product and of what you produce?

Dr. WILSON. Yes, sir. That is the key question, Mr. Chairman. Our team believes that this technology is going to change the way that we do business in biosurveillance, at least in the foreign arena. However, it has to be done in partnership with people, so we strongly value our partnerships with the Federal Government, as we have mentioned in our testimony, and we value their input and guidance for how best to extend the information to State and local authorities as well as other countries and NGOs.

I am not a fan of rolling out disruptive technology like this before it is ready. This program needs a lot of human time. It needs basically for me to sit down with, say, city officials in San Francisco and say, Folks, how do you do business? How might this information help you? When is it too much information? What are your reporting priorities? What are your concerns? How many people do you have to do this? Do you have the bandwidth to handle receiving this information?

At the end of the day—and it may take us years to get there—this information has to get all the way down to the individual health care provider regardless of what organization they belong to,

and that includes veterinarians as well as agriculturalists. To get there from here, though, again, this is going to require a lot of culture change, a lot of dialogue, a lot of socialization of the technology, and that is just something that you really just cannot rush.

The problem, of course, that we have is that Mother Nature may not wait for that, so we are kind of in a race against time, if you will, to figure out the best solution possible. And this is why we do this with our partners, and we do not operate in a vacuum.

Senator AKAKA. Thank you.

Dr. Flesness, human disease surveillance in developing countries is traditionally weak. This is why programs such as those implemented by AID, CDC, and DOD are so important. However, one could imagine that animal disease surveillance in developing countries is even more weak.

What are your thoughts about bringing ZIMS to developing countries and in helping these countries develop better disease surveillance?

Mr. FLESNESS. Thank you, Mr. Chairman. ISIS has been expanding its membership network for the 34 years it has existed, and we attend national and regional conferences of the zoos in Latin America, Asia, Africa, and so on. So we have gotten to know many of the people in the institutions who would like to become members of this global network. So we know that there is interest and will and even friendships.

The two obstacles that remain are essentially financial: One is access to technology and technology transfer. That is both IT and lab and veterinary. And the other is our annual membership dues, which average about $4,000 per year per institution. In the developing world, that is a problem. There are about 500 institutions that we do not yet have to add to our 700. We estimate there are 1,200 quality zoos and aquariums in the world. We would like to bring them in. That would require a couple of million dollars a year subsidy.

Senator AKAKA. Yes. Well, I want to thank all of our witnesses. It is my hope that the work each of your organizations is doing will help our country and the U.S. public health officials ensure that any potential health threat to Americans is caught early and dealt with effectively. As with all programs, there is always room for improvement. I hope that the discussion of these activities today has helped identify some of those places where more work can be done. Situational awareness is central to our efforts to secure the homeland. Global disease surveillance is very much a part of these efforts. We must ensure that these activities are effective and also that they yield results, particularly over the long term. And your contribution to this hearing will certainly be helpful in our work in bringing this about.

I want to thank you all. There may be questions from other Members who will submit them for your responses. I want to thank you for being part of this hearing and contributing as you have. The hearing record will be open for 1 week for these Members to ask questions.

The hearing is adjourned.

[Whereupon, at 4:16 p.m., the Subcommittee was adjourned.]

APPENDIX

PREPARED STATEMENT OF SENATOR LIEBERMAN

October 4, 2007

Thank you, Mr. Chairman.

And thank you for holding this important hearing on the United States' preparedness and efforts to combat infectious disease. As stated by Dr. Margaret Chan, director of the World Health Organization, "International public health security is both a collective aspiration and a mutual responsibility."

A growing world population combined with the ease of global travel and a warming planet has lowered the barriers to the spread of infectious disease and now more than ever the United States must work cooperatively to identify and effectively respond to emerging threats. As our panel of witnesses illustrates a number of agencies are working on securing the United States by building capacity for the surveillance and detection of emerging infectious diseases overseas. The GAO report released in conjunction with this hearing says that the U.S. has invested approximately $84 million in this effort over the last two years. However, thee is still work to be done.

Not only are diseases emerging at an unprecedented rate, but an overwhelming proportion of these diseases are zoonotic. Avian influenza, West Nile, SARs, and HIV/AIDS are recent and devastating examples of the impact animal born diseases can have when they transition to humans.

The appearance of zoonotic diseases in humans is prevalent in developing countries, where trade in wild animals is concentrated. Therefore, ti is important for the U.S. to have a strong presence in these countries to allow for the training of individuals and the sharing of data. USAID and CDC have been successfully collaborating with the Wildlife conservation Society through the Global Avian Influenza Network for Surveillance (GAINS) in 28 countries detecting disease in wild bird populations.

While this disease specific program has proven successful it is just the tip of the iceberg—a key to preventing a pandemic is early detection. Surveillance of an array of wildlife populations will increase our ability to fight the next emerging disease as we will have a better understanding of our enemy. For this reason, my colleagues, Senators Akaka and Brownback, and I have introduced legislation to expand the collaboration of USAID and CDC with the Wildlife Conservation society to address the need for a global wildlife disease surveillance system.

We must prevent the outbreak and spread of new zoonotic diseases that have no treatments or cures to save the next generation from suffering the pain millions have faced from HIV/AIDS and avian influenza.

Thank you, Mr. Chairman.

United States Government Accountability Office

GAO

Testimony

Before the Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia, Committee on Homeland Security and Governmental Affairs, U.S. Senate

For Release on Delivery
Expected at 10:00 a.m. EDT
Friday, September 28, 2007

INFLUENZA PANDEMIC

Federal Executive Boards' Ability to Contribute to Pandemic Preparedness

Statement of Bernice Steinhardt, Director
Strategic Issues

GAO-07-1259T

September 28, 2007

GAO
Accountability • Integrity • Reliability

Highlights

Highlights of GAO-07-1259T, a testimony before the Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia, Committee on Homeland Security and Governmental Affairs, U.S. Senate

INFLUENZA PANDEMIC

Federal Executive Boards' Ability to Contribute to Pandemic Preparedness

Why GAO Did This Study

The federal executive boards (FEB) bring together federal agency and community leaders in major metropolitan areas outside Washington, D.C., to discuss issues of common interest, including pandemic influenza. This testimony addresses the FEBs' emergency support roles and responsibilities, their potential role in pandemic influenza preparedness, and some of the key challenges they face in providing emergency support services.

The issues discussed in the testimony are based on the GAO report, *The Federal Workforce: Additional Steps Needed to Take Advantage of Federal Executive Boards' Ability to Contribute to Emergency Operations* (GAO-07-515, May 2007). GAO selected 14 of the 28 FEBs for review because they coordinate the greatest number of federal employees or had recent emergency management experience. In this report, GAO recommended that the Director of the Office of Personnel Management (OPM) work with the Federal Emergency Management Agency (FEMA) to formally define the FEBs' role in emergency planning and response. In completing the FEB strategic plan, OPM should also establish accountability for the boards' emergency support activities and develop a proposal to address the uncertainty of funding sources for the boards. While not commenting specifically on the recommendations, OPM said it is building a business case through which to address the resources FEBs need to continue operations.

To view the full product, including the scope and methodology, click on GAO-07-1259T. For more information, contact Bernice Steinhardt at (202) 512-6806 or steinhardtb@gao.gov.

What GAO Found

Located in 28 cities with a large federal presence, the FEBs are interagency coordinating groups designed to strengthen federal management practices and improve intergovernmental relations. The FEBs bring together the federal agency leaders in their service areas and have a long history of establishing and maintaining communications links, coordinating intergovernmental activities, identifying common ground, and building cooperative relationships. The boards also partner with community organizations and participate as a unified federal force in local civic affairs.

OPM, which provides direction to the FEBs, and the boards have designated emergency preparedness, security, and safety as an FEB core function and are continuing to work on a strategic plan that will include a common set of performance standards for their emergency support activities. Although not all FEB representatives agreed that the boards should play an expanded role in emergency service support, many of the FEB representatives cited a positive and beneficial working relationship with FEMA. As one of their emergency support activities, the FEBs and FEMA, often working with the General Services Administration, host emergency planning exercises and training for federal agencies in the field.

The FEBs' emergency support role with its regional focus may make the boards a valuable asset in pandemic preparedness and response. The distributed nature of a pandemic and the burden of disease across the nation dictate that the response will be largely addressed by each community it affects. As a natural outgrowth of their general civic activities and through activities such as hosting emergency preparedness training, some of the boards have established relationships with, for example, federal, state, and local governments; emergency management officials; first responders; and health officials in their communities. Some of the FEBs are already building capacity for pandemic influenza response within their member agencies and community organizations by hosting pandemic influenza training and exercises. The communications function of the FEBs is also a key part of their emergency support activities and could be an important asset for pandemic preparedness and response.

The FEBs, however, face key challenges in providing emergency support, and these interrelated issues limit the capacity of the FEBs to provide a consistent and sustained contribution to emergency preparedness and response. First, their role is not defined in national emergency plans, which may contribute to federal agency officials being unfamiliar with their capabilities. In addition, with no congressional appropriations, the FEBs depend on host agencies and other member agencies for their resources. This has resulted in inconsistent funding for the FEBs nationwide and creates uncertainty for the boards in planning and committing to provide emergency support services.

Mr. Chairman and Members of the Subcommittee:

I am pleased to be here today to discuss the federal executive boards (FEB) and, in particular, their ability to contribute to the nation's efforts to prepare for a potential influenza pandemic and help protect federal employees, approximately 85 percent of whom work outside the greater Washington, D.C., area. Located in 28 cities with a large federal presence, the FEBs are interagency coordinating groups designed to strengthen federal management practices and improve intergovernmental relations. FEBs bring together the federal agency leaders in their service areas and have a long history of establishing and maintaining communication links, coordinating intergovernmental activities, identifying common ground, and building cooperative relationships. The boards also partner with community organizations and participate as a unified federal force in local civic affairs.

In a recent report to you, we examined the FEBs and concluded that the regional focus of the FEBs' emergency support services could aid in pandemic influenza planning and preparedness efforts.[1] We also observed that the boards face several key challenges in carrying out their emergency support role. My statement today will review our findings and present the actions we believe need to be taken to take better advantage of these unique organizations.

Background

The nature of pandemic influenza presents distinctive challenges. Unlike incidents that are discretely bounded in space or time (e.g., most natural or man-made disasters), a pandemic is not a singular event, but is likely to come in waves, each lasting weeks or months, and pass through communities of all sizes across the nation and the world simultaneously. While a pandemic will not directly damage physical infrastructure, such as power lines or computer systems, it will threaten the operation of critical systems by potentially removing from the workplace the essential personnel needed to operate them. According to the National Strategy for Pandemic Influenza Implementation Plan, the center of gravity of the pandemic response will be in communities.[2] The distributed nature of a

[1]GAO, *The Federal Workforce: Additional Steps Needed to Take Advantage of Federal Executive Boards' Ability to Contribute to Emergency Operations*, GAO-07-515 (Washington, D.C.: May 4, 2007).

[2]Homeland Security Council, *National Strategy for Pandemic Influenza Implementation Plan* (Washington, D.C: May 2006).

pandemic, as well as the sheer burden of disease across the nation over a period of months or longer, means that the federal government's support to any particular state, tribal nation, or community will be limited in comparison to the aid it mobilizes for disasters such as earthquakes or hurricanes, which strike a more confined geographic area over a shorter period of time. This makes it essential to have joint and integrated planning across all levels of government and the private sector to ensure that available plans and response actions are complementary, compatible, and coordinated.

Created by a Presidential Directive in 1961, the FEBs are composed of the federal field office agency heads and military commanders in the FEBs' areas of service. The FEBs' overall mission over the past 46 years has included supporting and promoting national initiatives and responding to the local needs of federal agencies and their communities through activities such as the Combined Federal Campaign and local scholarship programs. The regulations that guide the boards[3] describe emergency operations as one of their functions, although the boards are not intended to be first responders. The regulations also state that the Director of the Office of Personnel Management (OPM) is responsible for overseeing and directing the operations of all of the FEBs consistent with the law and with the directives of the President. Research has shown that systems like the FEBs have proven to be valuable public management tools because they can operate horizontally, across agencies in this case, and integrate the strengths and resources of a variety of organizations in the public, private, and nonprofit sectors to effectively address critical public problems, such as pandemic influenza.[4]

However, determining the appropriate emergency operations for the FEBs to provide is challenging because of several limitations. Although membership by agency heads on the boards is required, active participation is voluntary in practice, and the boards operate with no independent authority. The FEBs also have no congressional charter and receive no congressional appropriation but rather depend on voluntary

[3]5 C.F.R. § 960.

[4]See, for example, GAO, *Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies*, GAO-06-15 (Washington, D.C.: Oct. 21, 2005), and Donald P. Moynihan, *Leveraging Collaborative Networks in Infrequent Emergency Situations* (Washington, D.C.: IBM Center for the Business of Government, June 2005).

contributions from their member agencies. The boards also rely on a host agency, generally the one with the greatest number of employees in the area, to provide staff, usually one or two full-time personnel, including an executive director.

Scope and Methodology

This statement is based on our May 4, 2007, report, requested by the Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia, Senate Committee on Homeland Security and Governmental Affairs.[5] Our objectives in that report were to (1) identify the actions FEBs have taken to fulfill their emergency preparedness and response roles and responsibilities, (2) describe the key challenges facing the FEBs in fulfilling these roles and responsibilities, and (3) evaluate the extent to which the FEBs can contribute to emergency preparedness and response to pandemic influenza. We selected 14 of the 28 FEBs for review because they coordinated the greatest number of federal employees or had recent emergency management experience. The selected FEBs were Atlanta, Baltimore, Boston, Chicago, Dallas-Fort Worth, Denver, Minnesota, Los Angeles, New Orleans, New York City, Oklahoma, Philadelphia, San Francisco, and Seattle. We interviewed at least two key FEB representatives, including the chairs or vice chairs and the executive directors from the 14 selected boards. Additionally, we reviewed FEB documents, such as annual reports, monthly activity reports, minutes, and correspondence, at the selected sites. We also interviewed OPM and Federal Emergency Management Agency (FEMA) officials at their headquarters in Washington, D.C., and two FEMA regional directors based in Chicago, Illinois, and Denton, Texas. We conducted our work from March 2006 through February 2007 in accordance with generally accepted government auditing standards.

[5]GAO-07-515.

FEB Emergency Preparedness and Response Roles and Responsibilities Are Being Developed as a Core Function of the Boards

To assist in standardizing emergency activities across the FEB system, OPM and the boards are developing a multiyear strategic plan that will include a core function for the FEBs called emergency preparedness, security, and employee safety. The plan will increase accountability by including expectations and measures to assess how well each FEB is performing the activities. OPM officials recognize that the FEBs can add value to regional preparedness efforts as vehicles for communication, coordination, and capacity building but acknowledge that the emergency activities of the FEBs have varied from board to board. The inclusion of the emergency support function in the strategic plan is intended to provide a more consistent delivery of FEB emergency preparedness and response programs and activities for the federal workforce across the system of 28 boards.

At the time of our review, all of the 14 boards in our study had some type of emergency communications network and emergency preparedness council in place. The FEBs are charged with providing timely and relevant information to support emergency preparedness and response coordination, and OPM expects the boards to establish notification networks and communications plans to be used in emergency and nonemergency situations. The boards are also expected to disseminate relevant information received from OPM and other agencies regarding emergency preparedness information and to relay local emergency situation information to parties such as OPM, FEB members, media, and state and local government authorities.

According to OPM, the FEB role in emergency service support also includes coordination activities. For example, OPM reported that it expects the boards to serve as federal liaisons for state and local emergency officials and to assess local emergency situations in cooperation with federal, state, and local officials. Although all of the boards reported some involvement of state and local officials in their emergency activities, the degree of board connections with state and local officials varied. The Minnesota FEB and the Oklahoma FEB, for example, reported strong relationships with state and local government officials, state and local emergency management leaders, and private sector businesses. The Dallas-Fort Worth FEB executive director reported that the board partners with state and local government representatives, the private sector, law enforcement, and first responders, all of which are key players in assessing local emergency situations. On the other hand, the Chicago FEB executive director said that because Chicago is so large, the board has few established relationships with state and local officials. The

chair of the Boston FEB said its board had 24-hour contact numbers for some state officials but not city officials.

The FEBs have played a role in responding to past emergencies. For example, when the Oklahoma City Murrah Federal Building was bombed on April 19, 1995, the FEB staff knew all of the agencies in the Murrah Building; the home telephone numbers of critical staff; the city, county, and state principals in Oklahoma City; and which federal agencies were available to provide immediate relief and support. During hurricanes Katrina and Rita, according to a FEMA official, the New Orleans FEB executive director established and maintained an essential communication link between FEMA's Office of National Security Coordination and OPM. The New Orleans FEB also served as a conduit for information between Washington and local federal agencies and was able to provide status updates to identify common needs or problems that agency leaders were facing that required expedited assistance to resolve. As another example, during nonemergency but disruptive events, such as political conventions or rallies, the FEBs in the affected areas have helped to contain the potential disturbance to federal agencies' operations.

Looking ahead, however, representatives from 14 of the 28 FEBs disagreed on the role the boards should play in emergency service support, particularly during an emergency. Without adequate staff and resources, some of the executive directors expressed concern that they will not be able to meet expectations. One executive director, for example, commented that there was a general expectation within his board's metropolitan federal community that the FEB will assume a significant leadership role during a possible future emergency. He observed, however, that limited and declining funding does not provide for an effective communication system. Consequently, he felt that this expectation was unrealistic and may contribute to major misunderstandings in the event of a significant emergency. On the other hand, several of the executive directors felt that the FEBs would be able to accomplish much more in this area with additional resources. For example, one executive director, with an emergency operations background, emphasized that if the boards were given dependable funding and increased stature within the federal government by formal recognition of their emergency support role, their return on investment in terms of emergency support functions would be substantial.

Despite the varying perspectives on an expanded emergency support role for the FEBs, many of the executive directors or chairs from the boards cited a positive and beneficial working relationship with FEMA. An

important FEB emergency support responsibility is facilitating continuity of operations (COOP)[6] and other emergency planning, and the FEBs work with FEMA and the General Services Administration (GSA) to develop and strengthen agency COOP and other emergency plans. For example, most of the boards have COOP working groups or emergency committees, often lead by FEMA and GSA, which help conduct various emergency exercises. The exercises are designed to provide insight and guidance that can be used to develop specific action plans that address interruptions in services provided by their agencies. For example, a FEMA official testified in May 2006 that the COOP working groups established with the FEBs in New Orleans, Houston, and Miami prior to the hurricanes of 2005 and the many COOP training and exercise activities conducted by these organizations were instrumental in facilitating federal agency recovery and reconstitution efforts following hurricanes Katrina, Rita, and Wilma.[7] According to a FEMA director, many of the agencies in the field have COOP policies, procedures, and planning in place in part because the FEBs have assisted FEMA in accomplishing its responsibilities as lead agent for federal executive branch COOP programs.

FEBs' Unique Role in the Local Federal Community Can Aid in Pandemic Influenza Preparedness and Response

As mentioned previously, the nature of pandemic influenza, which presents different concerns than localized natural disasters, may make the FEBs a valuable asset in pandemic preparedness and response. The distributed nature of a pandemic and the burden of disease across the nation dictate that the response will be largely addressed by each community it affects. The FEBs' connections to their local communities could play an important part, as predisaster relationship building and planning are often the cornerstones of this type of incident management.

Many of the FEBs have cultivated relationships within their federal, state, and local governments and their metropolitan area community organizations as a natural outgrowth of their general activities. For example, FEB activities, such as the Combined Federal Campaign and scholarship programs, bring the boards into contact with local charities and school boards. Through activities such as hosting emergency preparedness training or through participation in certain committees,

[6]COOP planning is an effort conducted by agencies to ensure that the capability exists to continue essential agency functions across a wide range of potential emergencies.

[7]Statement of Robert Shea, Acting Director of Operations, Federal Emergency Management Agency, House Committee on Government Reform, May 24, 2006.

some of the FEBs have established relationships with emergency management officials, first responders, and health officials in their communities. In addition, through their facilitation of COOP exercises and training, the FEBs bring together government leaders, health officials, and first responders in a venue where the parties can share ideas, discuss plans, and coordinate approaches.

In terms of current pandemic planning, some of the FEBs are already building capacity for pandemic influenza response within their member agencies and community organizations by hosting pandemic influenza training and exercises. For example, some of the boards have been involved in pandemic influenza-related activities that range from informational briefings to coordinating pandemic exercises that included nonprofit organizations, the private sector, and government. A number of FEBs have held pandemic influenza tabletop exercises. Pandemic influenza tabletop exercises are based on a series of possible events that could occur during an outbreak of pandemic influenza with scenarios constructed to facilitate problem solving and to provoke thinking about gaps and vulnerabilities. For example, the Boston FEB, together with the Massachusetts Emergency Management Agency and FEMA, held a pandemic influenza tabletop exercise in November 2006. The exercise objectives included goals such as helping to increase the awareness of federal, state, local, and tribal government agencies of the requirement to incorporate pandemic influenza procedures into COOP planning and identifying special considerations for protecting the health and safety of employees and maintaining essential government functions and services during a pandemic outbreak. The Seattle FEB, with the assistance of FEMA and the City of Seattle, sponsored an all-day conference in October 2006 called "Pandemic Flu: Get Smart, Get Ready! Conversation Tools and Tips."

The Minnesota FEB has been a leader among the boards in pandemic influenza planning. Using a tabletop exercise it created, the board hosted its first pandemic influenza exercise in February 2006, with a follow-up exercise in October 2006. The October exercise included approximately 180 participants from 100 organizations within federal agencies, state and local government, and the private sector. The Minnesota FEB executive director noted that Minnesota has excellent state and local government relationships, which help to facilitate planning of this nature. Examples of partnerships the board has with state and local entities include those with the State of Minnesota Division of Homeland Security and Emergency Management, the Minnesota Department of Health, the St. Paul Chamber of Commerce, and the American Red Cross. In addition, the Minnesota

FEB executive director serves on the board of directors of the Association of Minnesota Emergency Managers as the federal agency liaison, a newly created partnership with the organization.

The communications function of the boards is also a key part of their emergency support activities and could be an important asset for pandemic preparedness and response. For example, many of the FEBs are already active in disseminating pandemic influenza preparedness materials. The National Strategy for Pandemic Influenza Implementation Plan also emphasizes that government and public health officials must communicate clearly and continuously with the public throughout a pandemic, and the plan recognized that timely, accurate, credible, and coordinated messages will be necessary. For example, when asked about the role they envision the FEBs playing in the response to a pandemic, the Dallas-Fort Worth FEB representatives said that because the board is viewed by its member agencies as a credible source of information, the board's role should be to coordinate communications among member agencies. They gave the example of the Department of Health and Human Services working through the board to disseminate medical information to the local community.

During pandemic influenza, the FEBs have the potential to broaden the situational awareness of member agency leaders and emergency coordinators and provide a forum to inform their decisions, similar to what the FEBs provide for other hazards, such as inclement weather conditions. A FEMA official noted that FEBs have vital knowledge of the federal agencies in their jurisdictions, which can provide valuable situational awareness to community emergency responders.

Finally, some of the FEBs are considering the role they can play during pandemic influenza in assisting member agencies by supporting human capital functions, such as supporting the federal workforce and coordinating the deployment of personnel among member agencies as may be appropriate. Several FEB representatives said, for example, that they were considering how they could provide assistance in coordinating support to federal agencies responding to pandemic influenza, such as addressing personnel shortages by locating available resources among member agencies.

The FEBs Face Key Challenges in Providing Emergency Support Services

The FEBs face key challenges in carrying out their emergency support role. Several interrelated issues limit the capacity of FEBs to provide a consistent and sustained contribution to emergency preparedness and response.

First, their role is not defined in national emergency plans. According to both FEB directors and FEMA officials, the FEBs could carry out their emergency support role more effectively if their role was included in national emergency management plans. FEMA officials from two different regions said they felt the boards could be used more effectively and that they add value to the nation's emergency operations. They agreed with several of the FEB executive directors we interviewed who said the boards lack recognition within the federal government's emergency response structure and their value in emergency support was often overlooked by federal agency officials unfamiliar with their capabilities. A FEMA regional director noted that it is very important that the FEB emergency support role is understood, and he believed including the boards in emergency management plans was an opportunity to communicate the role of the FEBs and how they could contribute in emergencies involving the federal workforce.

In addition, varying FEB capabilities test the boards' ability to provide consistent levels of emergency support services across the country. The FEBs differ substantially in the size of their formal jurisdictions and in the number of federal employees and agencies served by each board. The map in appendix I shows the varying service areas of the 28 boards, and the table in appendix II shows how the number of federal employees and agencies served varies by FEB. As noted earlier, the FEBs also have no congressional charter and receive no congressional appropriation but rather rely on voluntary contributions from their member agencies. This has resulted in inconsistent funding for the FEBs nationwide, and the levels of support provided to the boards in terms of operating expenses, personnel, and equipment vary considerably.

The FEBs' dependence on host agencies and other member agencies for their resources also creates uncertainty for the boards in planning and committing to provide emergency support services. The lack of funding in a particular year may curtail the amount of emergency support an individual board could provide. Many of the FEB representatives characterized the board funding structure as dysfunctional, and some expressed concern that their activities will be further affected by reduced agency funding and resource support as agency budgets grow more constrained. When boards' funding is precarious, the executive directors

spend the majority of their time soliciting resources from member agencies, without adequate time or resources to focus on mission-related activities. Some federal agencies that have voluntarily funded FEB positions in the past have begun to withdraw their funding support. Several FEB representatives felt the uncertainty about the funding of the FEBs raises questions as to the survivability of the system and its ability to fulfill its emergency support function.

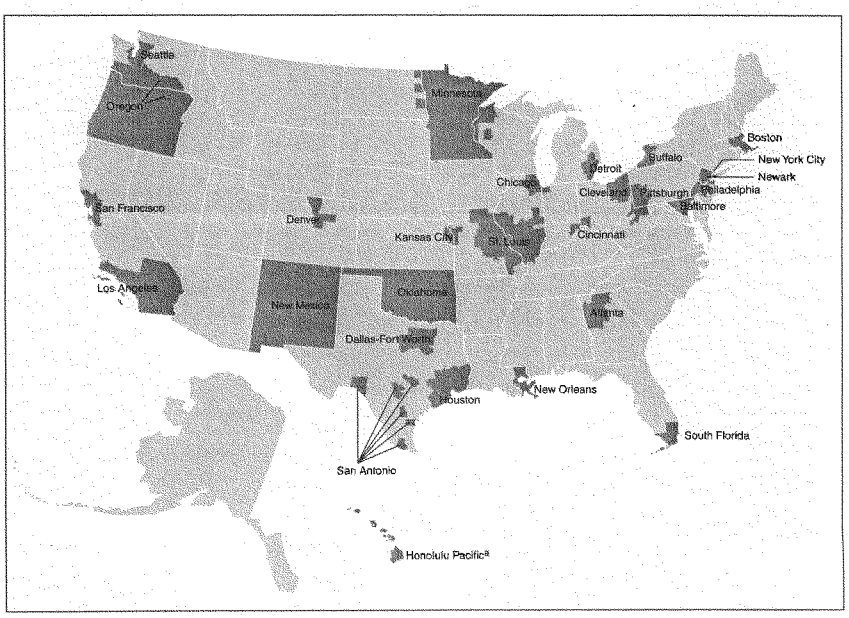
To address these challenges, our report recommended that OPM work with FEMA to develop a memorandum of understanding, or some similar mechanism, that formally defines the FEB role in emergency planning and response. We also recommended that OPM initiate discussion with the Department of Homeland Security and other responsible stakeholders to consider the feasibility of integrating the FEB emergency support responsibilities into the established emergency response framework, such as the National Response Plan. Finally, we recommended that OPM continue its efforts to establish measures and accountability for the FEBs' emergency support responsibilities and develop a proposal for an alternative to the current voluntary contribution mechanism that would address the uncertainty of funding sources for the boards. OPM's work on a strategic plan with the FEBs affords the opportunity to complete the development of clear expectations for the FEBs in emergency operations and to develop appropriate performance measures for these expectations. OPM also has an opportunity, as part of this planning process, to consider alternative funding arrangements that would better match the roles envisioned for the FEBs. OPM said it is building a business case through which to address the resources FEBs need to continue operations and that institutionalized relationships with partners such as FEMA can help address funding issues.

Mr. Chairman and Members of the Subcommittee, this completes my statement. I would be pleased to respond to any questions that you might have.

Contacts and Acknowledgments

For further information on this testimony, please contact Bernice Steinhardt, Director, Strategic Issues, at (202) 512-6806 or steinhardtb@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this testimony. Individuals making key contributions to this testimony include William J. Doherty, Assistant Director, and Judith C. Kordahl.

Appendix I: Jurisdictional Boundaries of the 28 FEBs



Source: GAO presentation of OPM information.

[a]Includes civilian agencies in Guam.

Appendix II: Number of Federal Employees and Agencies Served by Each FEB in Descending Order of Employees Served

FEB	Federal employees served	Number of federal agencies
Los Angeles	118,250	230
San Antonio	91,130	68
Oklahoma	78,681	252
Honolulu-Pacific	72,155	96
San Francisco	70,000	150
Baltimore	69,488	140
Chicago	64,803	180
St. Louis	62,155	82
New York City	61,578	152
Atlanta	58,020	120
Dallas-Fort Worth	49,855	144
Philadelphia	48,238	154
Seattle	47,233	147
Boston	45,479	150
Denver	39,161	160
Kansas City	38,906	134
Newark	38,270	79
Minnesota	35,806	120
South Florida	35,672	129
Detroit	32,733	85
New Mexico	32,102	94
Oregon	31,000	225
Houston	29,419	115
Cleveland	25,842	91
Pittsburgh	24,898	107
New Orleans	20,141[a]	71[a]
Buffalo	15,935	100
Cincinnati	14,727	90

Source: OPM.

[a]Numbers are under review because of Hurricane Katrina.

Statement of
Kevin E. Mahoney
Associate Director
Human Capital Leadership and Merit System Accountability Division
U.S. Office of Personnel Management

before the

Subcommittee on Oversight of Government Management,
the Federal Workforce, and the District of Columbia
Committee on Homeland Security and Governmental Affairs
U.S. Senate

on

"The Role of Federal Executive Boards in Pandemic Preparedness"

September 28, 2007

Good morning, Mr. Chairman and Members of the Subcommittee. I am pleased to be here on behalf of our Director, Linda Springer, to discuss the role of Federal Executive Boards and how they can assist with Pandemic Preparedness and other Federal emergency planning and response efforts. We appreciate that this subcommittee has recognized the value of these boards, and we share your commitment to increasing their effectiveness.

Federal Executive Boards were first established by Presidential Directive in 1961 to address the need for greater coordination of regional and field activities of the Federal Government. The boards were directed to work on interagency regional cooperation and to establish liaison with state and local governments. There are currently 28 Federal Executive Boards across our nation. The contributions these boards can make towards emergency preparedness and assistance for Federal employees and their families – and for all Americans – have become more evident as a result of the terrorist attacks of September 11, 2001 and Hurricane Katrina in 2005. The National Strategy for Pandemic Influenza issued by President Bush in 2005 also provides opportunities for Federal Executive Boards to play a critical role which I will discuss further in my testimony.

OPM's Role with Federal Executive Boards

In close collaboration with the Chairs and Executive Directors of the Federal Executive Boards, OPM has established two primary lines of business – Emergency Preparedness, Security and Employee Safety, and Human Capital Readiness – as the focus for board activities. In addition to these lines of business, the boards are also expected to focus on establishing communication channels that can help build understanding and teamwork

among Federal agencies in the field. The experiences of 9/11 and Hurricane Katrina have demonstrated that these relationships need to be in place before an emergency occurs. We believe these communication channels can also enhance the effectiveness of non-emergency activities such as the Combined Federal Campaign program which facilitates donations by Federal employees to local and national charities.

While the Federal Government received criticism for its response to Hurricane Katrina, there were many successes that have not received the same level of attention. In particular, I want to acknowledge the key role that was played by the New Orleans Federal Executive Board, and its Executive Director, Kathy Barré, during that crisis. I think her efforts help to underscore how these boards can help coordinate the flow of information and guidance to the Federal workforce in the aftermath of such a catastrophe. During Katrina, the Board's Executive Director in New Orleans –

- Coordinated with OPM and the Federal Emergency Management Agency (FEMA) to collect information and communicate issues of concern regarding the Federal workforce from Federal agencies at the local level;
- Organized conference calls among agency executives, before and after the event, enabling them to coordinate decision-making on Federal workforce issues;
- Facilitated sharing of Federal workforce information to and from Washington by organizing teleconferences with FEMA, OPM, and other agencies;
- Obtained and disseminated guidance from OPM on human resource policies which apply in emergency situations; and,
- Helped to identify both the needs and the status of local Federal workers and their families to make sure they were part of FEMA's response activities.

During the past two years, as Katrina recovery and reconstruction efforts have continued, the New Orleans Federal Executive Board has continued to serve as a primary forum for discussion of ongoing issues related to the Federal workforce.

Two more recent events have demonstrated the importance of these boards and the relationships and communication channels they can bring to the table at the Federal regional level during emergency situations – the Minnesota bridge collapse and the contraction of tuberculosis by a Housing and Urban Development employee located in the New York City Federal Building. The bridge collapse occurred at the same time as the annual Conference of Federal Executive Boards in Washington, DC. Executive Director Ray Morris from the Minnesota board, whom you will hear from today, was in attendance, and immediately went into action to ensure updates were provided to local Federal agencies on the status of recovery efforts, road detours, and potential workforce issues. Similarly, in response to the tuberculosis incident, the Executive Director of our Federal Executive Board in New York City met quickly with agency heads working in the Federal Building and officials from the New York City Office of Health and Mental Hygiene. The meeting resulted in the immediate distribution of a letter describing the incident to all tenant agencies and their employees in that building.

OPM and Pandemic Influenza Preparedness

Director Springer and all of us at OPM take very seriously the direction President Bush has assigned to our agency with respect to pandemic preparedness. To help departments and agencies mitigate the effects of a pandemic event, OPM has developed human resource policies and mechanisms to assure the safety of the Federal workforce and the continuity of Federal operations. We have provided agencies with training and information for their human resources and emergency preparedness personnel. We have also conducted townhall meetings with the Department of Health and Human Services (HHS) to educate Federal employees on pandemic preparedness.

Federal Executive Boards have played, and should continue to play, a key role with this effort. Last year, the boards distributed OPM's three-part pandemic guidance to Federal agencies at the local level and sponsored tabletop exercises using pandemic scenarios, to increase agency regional readiness. Most recently, we have provided the boards with our new guide containing helpful information for Federal employees entitled "Preparing for Pandemic Influenza." We have asked the boards to include a link to this new guide on their websites, and we have shared information on how agencies at the local level can request additional copies. OPM also helped to facilitate communication between HHS and Federal Executive Boards on the issue of state planning for vaccine distribution. We made sure that our partners at HHS were aware that the boards can be a resource for them as they address Federal agency coordination efforts in the field.

During Fiscal Year 2008, OPM will continue to work with Homeland Security officials and others to ensure to ensure that Federal Executive Boards are incorporated into national emergency planning. We would like to see Board Executive Directors devote at least 50% of their time towards pandemic and other emergency preparedness efforts that will assist Federal employees and their families at the regional level.

OPM's Response to GAO Recommendations

Mr. Chairman and Senator Voinovich, the recent report you both requested from the Government Accountability Office (GAO) concerning Federal Executive Boards and their emergency operations role acknowledges much of what I have already described in my statement. The report also makes four recommendations for enhancing the effectiveness of these boards which I would like to briefly address.

First, GAO recommends that OPM work with FEMA to develop a memorandum of understanding (MOU) that formally defines the role of Federal Executive Boards in emergency planning and response. In July, my staff met with FEMA staff to discuss this recommendation, and we have agreed to develop an MOU which lays out key functions we believe the boards can perform in support of FEMA's emergency planning and response efforts. We will be consulting with Federal Executive Boards as we work through the technical details of the MOU this fall, with the goal of having a signed document by the end of this calendar year.

Second, GAO recommends that OPM initiate discussion with the Department of Homeland Security (DHS) and other stakeholders to consider the feasibility of integrating Federal Executive Board emergency support responsibilities into the established emergency response framework, such as the National Response Plan. I believe the MOU that we have agreed to establish will provide an appropriate mechanism which will help DHS and specifically FEMA with their framework efforts. We are also reviewing the proposed framework that DHS has recently published, and we will be submitting comments concerning that framework and the role of Federal Executive Boards. In addition, we are working with the White House Homeland Security Council staff to integrate Federal Executive Boards into plans for specific events, like a pandemic influenza.

Third, GAO recommends that OPM continue its efforts to establish performance measures and accountability for the emergency support responsibilities that should be performed by Federal Executive Boards before, during, and after an emergency event affecting the Federal workforce. Currently, the boards report monthly and annually on common activities and outcomes under the two lines of business I referenced earlier in my testimony -- Emergency Preparedness, Security and Employee Safety, and Human Capital Readiness. During the annual board conference in July, we provided basic training on performance measures. However, we agree that more work can be done to develop and standardize performance measures for these activities and we will be working closely with board leadership to ensure we have such a system in place by the end of Fiscal Year 2008 – a system that emphasizes results and accountability.

Finally, as an outgrowth to all of these efforts, GAO has urged OPM to look at funding alternatives that might address the uncertainty some of the boards face with respect to staffing and inconsistent capacity to plan for and respond to emergencies. We are, in fact, exploring with OMB and others in the Administration, such as the President's Management Council (PMC) and the Chief Human Capital Officers (CHCO) Council, a potential solution that could provide a more permanent funding mechanism for the 28 current Federal Executive Boards. While the mechanics for this proposal are still being discussed within the Administration, we are hopeful for a solution that can address the funding uncertainties identified in GAO's report.

Conclusion

Mr. Chairman, OPM is proud of the accomplishments of the Federal Executive Boards, especially with the planning and response to emergency situations where lives are at stake and Government services are critical. We will continue to work with the boards and the agencies they serve to better prepare the Federal workforce at the regional level for a possible pandemic influenza, or any other emergency event that might occur. I am happy to answer any questions you or other Subcommittee Members may have regarding my statement.

STATEMENT FOR THE RECORD

Art Cleaves

Region I Administrator,
Federal Emergency Management Agency
Department of Homeland Security

Before the

Committee on Homeland Security

Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia

United States Senate

"The Role of Federal Executive Boards in Pandemic Preparedness

Friday, September 28, 2007
10:00 A.M., Dirksen Senate Office Building, Room 342

Good morning Chairman Akaka, Ranking Member Voinovich and Members of the Subcommittee. My name is Art Cleaves, and I am privileged to serve as the Regional Administrator for the Department of Homeland Security's Federal Emergency Management Agency (FEMA) Region I. Region I, which is headquartered in Boston, covers the New England States of Maine, Vermont, New Hampshire, Massachusetts, Connecticut, and Rhode Island.

Thank you for inviting me to appear before you today to highlight for you the steps FEMA and Region I are taking to strengthen the region's preparedness as well as our role and strong interaction with the Federal Executive Board. Let me begin with a brief overview of Region I and my role as the Regional Administrator.

As the primary FEMA representative and coordinator, I oversee the development, implementation and execution of all FEMA Region I programs and initiatives, and have planning and operational oversight of special projects related to building a strong, capable, and responsive Region. My goal is to help Administrator Paulison build a new FEMA that will be the Nation's preeminent emergency management and preparedness organization by ensuring FEMA Region I: has collaborative and supportive relationships with the six New England States, non-governmental organizations, and the private sector focused in preparedness and response to all-hazard threats; has the necessary operational systems, planning and assessment tools, training, exercises, and equipment in place, 365 days a year, seven days a week, 24 hours a day; and has a robust FEMA infrastructure, appropriate resources, and a hardworking, professional staff.

Discussion of the Role of "New FEMA" in Regional Preparedness

Administrator Paulison has laid out a vision for a new FEMA that integrates and incorporates the new missions assigned to FEMA by the Post-Katrina Emergency Management Reform Act of 2006. An enhanced role in regional preparedness is an important part of this vision. In the new FEMA, preparedness activities will be integrated with a regional focus designed to help better understand our States and local communities. FEMA's Regions will become a networked organization that will be instrumental in the development of a seamless connection between all partners, including Federal, State, local, tribal and territorial governments, Homeland Security Advisors and private sector organizations. This will result in a comprehensive preparedness

strategy that will create awareness and involvement from the State or local level down to the individual community. Our approach to preparedness is an all hazards approach which includes terrorist events, other man-made incidents and natural disasters. This awareness will become embedded through training and exercising from the local level all the way up to our headquarters.

Our Regional Response Coordination Center (RRCC) will be the focal point for all activity. We are continually utilizing the RRCC as a center for regional response and awareness. Our operational posture is continuing to develop in our RRCC through our Situational Awareness Unit (SAU). The SAU is a key operational concept utilizing a 24/7 unit that provides twice daily reports giving a snapshot of events in our region. The focus of the report varies, covering issues such as the power grid status, fuel supply, river status (depth, flood stage, etc.), ground saturation data, status of transportation systems, propane availability, liquefied natural gas supply, primary warning point data, flood hazard data, and maps of hazard areas. We are in the process of enhancing the SAU this year to include input from the Joint Terrorism Task Force (JTTF), Fusion Centers and State Primary Warning Points. Information gathered at the SAU will be passed on to the NRCC and back to States. Coordination of this effort will be both internal and external.

We must connect with our partners before, during and after disasters. This effort has to be consistent throughout the lifecycle of an incident, from prevention through long-term recovery. The region must execute this effort with an enthusiastic team effort behind which we fully integrate preparedness and mitigation actions. It is a focused effort that requires strategic planning with identified specific outcomes and a key to success is a quality communications plan.

We are also in the process of conducting readiness assessments in our region. This assessment makes use of the National Incident Management System. This effort will provide us with a true and accurate full assessment of our State partners. On the regional side we will be using this assessment to produce our Regional Status Report. Through these assessments we will help our

State and local partners understand the interdependencies needed to respond to a catastrophic event.

Another component critical to preparedness integration is coordination with other DHS agencies. This coordination will be in the form of a twice monthly conference call with all of the senior regional leadership of DHS. This call will be a forum to exchange information ensuring communication on all levels of DHS (TSA, USCG, CBP, and ICE). We will also be conducting a monthly call with our State Homeland Security Advisors to discuss specific State issues.

How FEMA is engaging Federal Executive Boards in emergency preparedness

Federal Executive Boards, known more commonly by their acronym "FEB", provide a critical link to all Federal Agencies with a presence in a local area and are a critical element to prevention, protection, response and recovery, as well as continuity of operations (COOP). FEMA Region I has a long standing relationship with the Boston FEB. The region is an active member of the FEB and participates in their monthly meetings. The Boston FEB has recently developed an emergency preparedness committee and FEMA is the lead agency for this committee. We have also been engaged with the FEB in our emergency preparedness activities. Recently we conducted a "Train the Trainer" seminar with members of the FEB on personal preparedness. There were several members of the FEB who attended the training with a goal of bringing the personal preparedness message back to each of their FEB agencies.

Another facet of our emergency preparedness is our quarterly Regional Interagency Steering Committee (RISC) meetings. FEB member agencies have always been active participants in the RISC meetings. Last week we conducted a RISC meeting which focused on emergency preparedness. Nearly 90 Federal, State, and local representatives attended, including many members of the FEB.

In July, the region hosted our second Homeland Security Advisors meeting. This meeting was hosted by the United States Coast Guard, another member of the FEB. The two and a half day meeting consisted of presentations from Homeland Security partners, the Federal Bureau of

Investigation, the United States Coast Guard, FEMA's Federal Coordinating Officer cadre, the Region A Principal Federal Official (PFO) George Naccara, State Adjutant Generals, the New Hampshire Office of Emergency Management (Fusion Center) and the General Services Administration.

The role of FEBs in Pandemic preparedness

FEBs can and should play an important role in pandemic preparedness. FEMA Region I will be conducting a region wide pandemic exercise in next quarter, the first such exercise of its kind in New England. The goal is to bring Federal and State partners together to look at the issues that will present themselves and to better understand the roles and responsibilities of each government entity. A major component to that exercise will be the use of the FEB as a unifying agent for Federal departments.

Our regional planning will involve key Federal agencies that will have the lead in a pandemic outbreak. The Department of Health and Human Services, including its Centers for Disease Control and Prevention, will be key components in a response effort, but given the nature of a pandemic and its potential for a broad reach, utilizing the FEB and all Federal Agencies will be critical.

In Region I we already have a very close working relationship with our Federal partners and participate regularly in exercises and conferences. The U.S Coast Guard, the Transportation Security Administration, Customs and Border Protection and all of DHS's component agencies work very closely in the region. It is those Federal Agencies that do not have an institutional role in emergency preparedness and response, but are a part of the FEB, that we must engage in the event of a pandemic.

The FEB and its relationship building mantra can be a key resource in the event of a pandemic. Here are just a few ways that the FEB can play a major role in a response situation:

- It can be an informational distribution resource for the Federal Government within the region. With established relationships and networking capabilities unique to the FEB for the distribution and exchange of information, it can assist with a critical component of a response operation. One of the important issues in a pandemic is coordinated communication among and between agencies while they are implementing social distancing recommendations. This will require greater connectivity through technology such as e-mail and video conferencing. The FEB is positioned to be a major asset as a repository of incoming and outgoing information for the Federal Government and it will be able to utilize existing standard operations to accomplish this. In Region I key players (PFO, FCO and RRCC staff) have defined, specific actions that would take in a pandemic outbreak. These actions would include the opening of the RRCC at a Level III. Level III activation of the RRCC is a full activation which includes all FEMA staff with emergency assignments there and full Emergency Support Function (ESF) personnel. The FEB plays a very important role in the education of other Federal partners by teaching the specific steps that we go through in our activation during an event.

- The FEB can be a conduit for resource support during a response operation. Perhaps the most critical resource needed in a pandemic will be staff to carry out the response mission. The FEB once again is uniquely positioned to be a coordinating body for obtaining essential staff and personnel. The nature of a pandemic is its ability to cripple a workforce, something about which government and the private sector are most concerned. With its already established relationships with other Federal agencies, the FEB could utilize its position to identify a workforce capable of assisting with a response. Since the FEB has an extremely close relationship with the Federal agencies in Region I, they may be asked to support our response operation. The assets that they can bring to assist could be staff from other federal agencies. During a pandemic outbreak staff shortages will exist in all agencies. FEB and FEMA should discus their respective pandemic plans to see how the agencies may be able to support FEMA's essential functions during a pandemic.

The FEB can and should play a major role in pandemic preparedness and response. By pre-identifying the unique capabilities that exist within the FEB and establishing what roles and

responsibilities it will undertake in a pandemic, the FEB can engage from the outset to enhance the response effort and integrate all Federal Agencies from the very beginning.

How can FEBs assist in COOP/COG of the Federal workforce?

The FEB has been engaged in the area of continuity of operations/continuity of government (COOP/COG) in Region I for some time. The FEMA Region I COOP coordinator has met with the FEB agencies and provided training to each on this issue. Each agency has a plan and has either exercised their plan or will do so soon. Recently we met with the Environmental Protection Agency (EPA) and discussed their COOP exercise that they conducted over a 3 day period. They identified this training as a pivotal part of there process in becoming better prepared.

As I have previously indicated to you, we are planning a Pandemic Influenza Exercise in Region I in December. This exercise will solicit active participation from many of our FEB members. This will give an opportunity to test our ability to COOP and ensure that COG is maintained. We feel this exercise and others will give us a more accurate picture of where we stand. We will continue to conduct these exercises so that when a real event occurs, we will be as ready as possible.

The FEB is an integral part of our COOP/COG initiatives and we will continue to work hand-in-hand to become better prepared.

Thank you for your time, and I look forward to answering your questions.

TESTIMONY OF RAYMOND MORRIS, EXECUTIVE DIRECTOR, MINNESOTA FEDERAL EXECUTIVE BOARD NATIONAL BUSINESS CENTER, DEPARTMENT OF THE INTERIOR, BEFORE THE SENATE SUBCOMMITTEE ON OVERSIGHT OF GOVERNMENT MANAGEMENT, THE FEDERAL WORKFORCE, AND THE DISTRICT OF COLUMBIA, HEARING ENTITLED, THE ROLE OF FEDERAL EXECUTIVE BOARDS IN PANDEMIC PREPAREDNESS

SEPTEMBER 28, 2007

Good morning Mr. Chairman and members of the subcommittee, I am Raymond Morris, Executive Director of the Minnesota Federal Executive Board (FEB). As an FEB Director, I am responsible for the coordination of Federal government agencies and entities within Minnesota and intergovernmental relationships with State and Local government agencies, especially in emergency preparedness matters.

My statement today will concentrate on FEB Minnesota's activities in emergency preparedness and response during crisis, including a potential pandemic influenza outbreak. I will focus on the current role our FEB plays in communicating vital information, coordinating activities, and serving as a catalyst to develop and enhance partnerships and collaborations among Federal, State and Local governments.

The early evening of August 1st was like any other hot and steamy end of the day in Minneapolis. Commuters were on their way home to loved ones and dinner. Two U.S. Army Corps workers, David Nerva and James Crosby, were at Lock and Dam #2 on the Mississippi River, locking through a passenger ferry that was going downstream. At 6:01 P.M. the tranquil scene at the lock was disrupted in a matter of seconds when the I-35W Bridge collapsed, nearly landing on the entrance to the lock. Nerva quickly closed the lock gates, thus stopping the flow of the river and giving dozens of people a chance to leave their sinking cars and swim to safety while Crosby ran to the bridge site to help some of the 108 survivors that rode the bridge down a distance of over 60 feet. These two Federal workers were among the unsung heroes in an evening marked by heroic efforts.

Of late Minnesota has had more than our share of natural and man-made disasters. The intergovernmental response to the sudden collapse of the I-35W Bridge in Minneapolis showed the nation the excellent state of preparedness among the Twin Cities emergency agencies. Another catastrophe struck Minnesota two weeks later as up to 20 inches of rain fell causing massive flooding throughout the southeastern portion of the state.

During both of these events FEB Minnesota acted swiftly, passing critical information through our email network from local and state government sources to over 100 Federal agencies. These updates continued throughout the month, keeping all agencies apprised of the status of the recovery operations, road detours, and other potential workforce impacts. The response to these disasters by all levels of government in Minnesota was exemplary due to one vital element: trust. All of the major players knew each other by name and knew they could count on each other.

In the past year FEB Minnesota joined the FBI United States Public and Private Partnership emergency communications network commonly known as USP3. This program, offered to all FEBs at no cost, gives us advanced communications capability to contact our key Federal officials in every agency throughout the state. We thank the FBI for this important communications tool.

FEB Minnesota has worked hard over the past 10 years serving as a catalyst in the Federal sector to establish and maintain critical relationships with State and Local governments.

Our FEB participated in many task forces on topics from bioterrorism to debris removal and cosponsored a tactical mock terror attack exercise in 1999. Prior to the attacks of 9/11 we met with officials gathered by the Oklahoma FEB to learn the important lessons from the bombing of the Murrah Federal Office Building in 1995 and the more than 100 tornados that hit the state just months prior to our visit.

On the day of the 9/11 attacks, FEBs around the nation passed critical information to all agencies. Following 9/11 we made the decision to include State and local government agencies in all of our presentations and tabletop exercises. FEB Minnesota has filled the role of educating agencies on current information and trends in terrorism, antiterrorist activities, safe mail handling following the anthrax attacks, transportation safety, bioterrorism and pandemic influenza and, of course, Minnesota's weather challenges. The State of Minnesota has reciprocated by hosting DHS-funded emergency management classes in Federal conference centers.

Since 2001 FEB Minnesota has sponsored over 20 half- or full-day seminars open to all agencies, with expert speakers from the CDC, FBI, Secret Service, FEMA, Transportation Security Administration, U.S. Military Departments, and Minnesota State and Local Government agencies, to name a few. We hosted five major tabletop exercises, including the first large-scale pandemic influenza exercise in the country, entitled Steadfast Response II. The pandemic segment of this exercise was created by FEB Minnesota in conjunction with the Minnesota Division of Homeland Security and Emergency Management and the Minnesota Department of Health.

In the past year, we have held two additional tabletop exercises. The first was the Pan Flu II exercise that was developed by FEB Minnesota with assistance from the state health department. This exercise continued exploring the adverse impact of a pandemic to Federal, State and Local government agencies as well as key infrastructure businesses who were members of the FBI Infragard Program. In February we hosted Going To Red, Phase I, that explored the national threat of nuclear terrorism culminating with a 10 kiloton improvised nuclear device exploded outside the State Capitol City of Saint Paul. This exercise was developed by the FEB Minnesota in conjunction with FEMA and GSA Region V, Radiological Assistance Program of Argonne National Laboratory, FBI – Minneapolis Field Office, Minnesota Division of Homeland Security and Emergency Management, Cities of Saint Paul and Minneapolis, and the Association of Minnesota Emergency Managers and the Metropolitan Emergency Managers Association.

Over the past three years we have worked extensively with officials of the Minnesota Department of Health on a program to cover key Federal workers such as air traffic controllers and FBI agents in the event of a pandemic or bioterrorism release, so that they could continue their critical duties without interruption.

Of most importance to our FEB is the establishment and cultivation of the personal relationships to bind all levels of government together to help Minnesota citizens in an emergency. Because the Federal Government is the third largest employer, public or private in Minnesota, FEB Minnesota represents all of the Federal agencies in the state as a board member of the Association of Minnesota Emergency Managers. We also have an active presence in other key intergovernmental organizations like the Metropolitan Area Managers Association and the FBI Minneapolis Field Office's Joint Terrorism Task Force. Strong personal relationships make emergency management work for our citizens.

There are three major elements that join to make the Minnesota FEB a strong and effective force. The first is an active and effective Executive Committee, comprised of 33 senior Federal officials who are all active partners in improving the effectiveness of the Federal workforce.

Second, we have an active intern program with over a dozen colleges and universities in Minnesota. This program provides FEB Minnesota annually with more than two additional work years of manpower and helps provide a quality experience working in government for students completing their Bachelor's or Master's degrees. Our intern program is essential to help instill the importance of public service, especially in light of challenges posed by the large scale retirements from the Federal service.

The final part of the equation making our FEB strong and effective is financial and administrative support by a key Federal agency. I am proud as a 28-year veteran of the Department of the Interior that the DOI is our funding and support agency.

The National Business Center funds the two professional FEB positions in Minnesota as well as an operating budget for travel and office expenses. In Minnesota, the U.S. Fish and Wildlife Regional Office

provides additional computer, telephone and other administrative support to our FEB.

FEB Minnesota focuses our emergency preparations on an all-hazards approach. Our coordination among Federal agencies and our State and local partners is a vital aspect of our contingency planning and educational activities. We serve as a catalyst to develop and cultivate personal partnerships among all entities of government—the fruits of which were evident during the recent collapse of the I-35W Bridge and the extensive flooding in the state. With these situations in mind, it would be helpful for the FEBs to be specifically mentioned in key Federal emergency planning documents when they are revised. Addition of the FEBs to documents like the National Response Framework will minimize the duplication of Federal resources, especially in the areas of crisis communications and training programs in Federal field areas. Defining the FEBs' existing Federal function in emergency preparedness planning documents would foster clear understanding of our roles by the State and local governments we partner with on training programs and other preparedness activities.

In closing, I would like to thank you Mr. Chairman and the subcommittee members for the opportunity to appear before you today. I am ready to answer any questions that you may have.

Additional Information:

FEB Minnesota – FY2006 Annual Report:
http://www.doi.gov/febtc/files/FEB_Annual06.pdf

FEB Minnesota – FY2005 Annual Report:
http://www.doi.gov/febtc/files/FEB_Annual05.pdf

FEB Minnesota – FY2004 Annual Report:
http://www.doi.gov/febtc/files/FEB_Annual04.pdf

Federal Executive Board Web:
http://www.feb.gov

Office of Personnel Management Information:
OPM Handbook On Pay and Leave Benefits For Federal Employees Affected By Severe Weather Emergencies or Other Emergency Situations http://www.opm.gov/oca/compmemo/2005/2005-18hb.pdf - See page 20
Federal Register – Proposed Rules:
November 25, 2002 ***Federal Executive Boards***
https://www.opm.gov/fedregis/2002/66-0070559-a.pdf

Code of Federal Regulations:
5CFR960-- PART 960_FEDERAL EXECUTIVE BOARDS
http://www.access.gpo.gov/nara/cfr/waisidx_07/5cfr960_07.html

GAO Reports:

The Federal Workforce: Additional Steps Needed to Take Advantage of Federal Executive Boards' Ability to Contribute to Emergency Operations GAO-07-515 May 4, 2007
http://www.gao.gov/new.items/d07515.pdf

Human Capital: Opportunities to Improve Federal Continuity Planning Guidance GAO-04-384 April 20, 2004
http://www.gao.gov/new.items/d04384.pdf

Decisions of the Comptroller General of the United States, Vol. 65, July 1986

http://archive.gao.gov/otherpdf1/088025.pdf

Federal Executive Boards Contribute to Improved Field Management but Future Is Uncertain GGD-84-31
March 6, 1984
http://archive.gao.gov/d5t1/123584.pdf

Department of the Interior – National Business Center Web:

http://www.nbc.gov/

Government Executive Magazine Articles

Hackers deface Federal Executive Board Web sites, August 18, 2006
http://www.govexec.com/story_page.cfm?articleid=34812&sid=1

Plan B June 6, 2005
http://www.govexec.com/story_page.cfm?filepath=/dailyfed/0605/060605ol.htm

Terrorism course proves popular with federal managers, May 30, 2003
http://www.govexec.com/story_page.cfm?filepath=/dailyfed/0503/053003p1.htm

Few agencies outside Washington buy antiterror gear for employees, April 7, 2003
http://www.govexec.com/story_page.cfm?filepath=/dailyfed/0403/040703p1.htm

Agencies craft policies for dealing with 'severe' terror threat, March 26, 2003
http://www.govexec.com/story_page.cfm?filepath=/dailyfed/0303/032603p1.htm

After attacks, some agencies revise evacuation plans, February 12, 2002
http://www.govexec.com/story_page.cfm?filepath=/dailyfed/0202/021202t1.htm

OPM recommends telecommuting as a way to help employees cope, September 26, 2001
http://www.govexec.com/story_page.cfm?filepath=/dailyfed/0901/092601t2.htm

Regional Powerhouses, November 1, 1996
http://www.govexec.com/story_page.cfm?filepath=/features/1196s3.htm

Statement of
Kimberly E. Ainsworth, Executive Director
Greater Boston Federal Executive Board

Before the
Senate Subcommittee on Oversight of Government Management, the Federal Workforce and the District of Columbia

On:

"The Role of Federal Executive Boards in Pandemic Preparedness"

September 28, 2007

Good morning Chairman Akaka and Members of the Subcommittee. Thank you for this opportunity to appear before you today to discuss the role of Federal Executive Boards in Pandemic Preparedness.

My name is Kimberly Ainsworth. I am an employee of the Environmental Protection Agency New England Region and am assigned to a long-term detail as Executive Director of the Greater Boston Federal Executive Board. I am here today in my capacity as Executive Director of the Greater Boston Federal Executive Board. I have held this position for 11 years.

In this role, I have primary responsibility for the coordination and implementation of all programs and activities under our two lines of business:

1.) Human Capital Readiness
2.) Emergency Preparedness, Employee Safety and Security

Federal Executive Boards have played an important role in emergency planning and response in many different ways since created in 1961. Today, I would like to provide examples of how Boston and others have contributed to the Federal workforce's overall readiness and response in meaningful ways and outline our vision for the future, including our pandemic preparedness efforts.

BACKGROUND

The United States Government is the Nation's largest employer, and among the top five employers in many metropolitan areas across our Country, including Massachusetts. During emergencies, it is the Federal workforce's responsibility to collaborate and act uniformly as one government to ensure the safety of our employees and customers. To that end, Federal Executive Boards play a vital role from a workforce planning perspective.

Although Federal Executive Boards are not first responders, emergency managers, or law enforcement professionals, we can and do play an important role in public safety. Federal Executive Boards are in a position to provide crucial communication links among Federal agencies, and State and local officials, alike. We ensure that Agency leaders are provided with

accurate, up-to-date and consistent information from local subject matter experts in order to make informed decisions.

DEMOGRAPHICS

Boston is the hub city for the New England Region. Most agency officials have responsibilities across the six New England States and many expand to New York, New Jersey and other areas along the Northeast.

More than 180 Federal agencies maintain a presence in Massachusetts. According to the most recent US Census statistics, there are approximately 78,000 civilian employees, 3000 active duty members of our Armed Forces and 17,000 Postal employees across our State. These numbers do not include contractors, consultants and grantees. (See attached: The Federal Workforce's Impact on Massachusetts: A Socio-Economic Report)

COLLABORATION

Although each Federal agency is responsible for the safety of its employees and the Continuity of Operations, Federal Executive Boards complement their efforts by facilitating collaboration on many different levels. This is extremely important as, according to the US Office of Personnel Management, more than 84 percent of the 1.5 million-person Federal workforce works outside of Washington, DC. Collectively, our goal is to ensure the safety and security of Federal employees and our customers while also ensuring that the essential business of government continues.

Although each Federal agency has its own mission and goals, there are many issues where collaboration is important, including during emergency preparedness, response and recovery. Further, although most Federal agencies have close working relationships with the State and local counterparts from a program standpoint, the Federal Executive Board strives to maintain working relationships with key State and local decision-makers, including the Governor's emergency management staff, for workforce planning issues.

BOSTON'S EXPERIENCE

Our experiences in Boston prior to 2001 focused primarily on weather-related events. The Federal Executive Board maintained an Emergency Weather Committee to collect data from subject-matter experts (*i.e.* the National Weather Service and Federal police) and coordinated information sharing among our agencies. The committee made recommendations to Federal decision-makers during extreme weather events. However, in the post 9-11 environment, our member agencies have greater needs and expectations of us. Our emergency preparedness role has expanded and our procedures have evolved.

Like most, we learned a lot from the events of September 11, 2001 and the days and weeks that followed.

And, the anthrax attacks that followed were troubling for everyone, especially Federal workers.

Federal employees everywhere banded together to ensure that the essential business of government continued. That said, many, including Federal employees, experienced an increased need for stress management and other employee assistance programs. Additionally, Federal employees sought out information about anthrax and how to protect themselves and identify potential threats. Federal Executive Boards responded to these needs and quickly engaged local Federal partners, such as the US Department of Health and Human Services and the US Postal Inspection Service, to offer government-wide seminars and other educational forums quickly and at no cost.

In 2002, Boston built on these lessons and unveiled the first-of-its kind comprehensive *Emergency Decision and Notification Plan*. Developed by an interdisciplinary Work Group, it outlines an all-hazards approach to emergency preparedness, response and recovery from a workforce planning perspective for our Federal community, including a pandemic. Potential hazards include local and national manmade and natural disasters as well as widespread civil unrest and shelter-in-place. (See attached Greater Boston Federal Executive Board Emergency Decision and Notification Plan.)

As part of this Plan, the Federal Executive Board collected 24/7/365 contact information for our local Federal agency decision-makers, and at least one back-up. A variety of communication strategies were designed to ensure widespread dissemination of accurate, up-to-date and consistent information around the clock. Mechanisms included email distribution lists, most commonly used during business hours, an internet web portal and an electronic telephone communications system.

(Of special note is that recently, with help from the FBI, Federal Executive Boards nationwide were granted access to Law Enforcement On-Line (www.leo.gov) and United States Public and Private Partnership (usp3.org.) All 28 Federal Executive Boards can utilize a uniform communication mechanism that will surely improve our capabilities. Prior to this system, FEBs operated independently and usually relied on local agencies for their communication needs. This often caused delays and confusion. The USP3 effort was spearheaded by the Dallas-Fort Worth Federal Executive Board, in cooperation with the Dallas FBI office, who saw a mutual benefit to expanding this interagency communication pilot program nationwide.)

Boston's Emergency Decision and Notification Plan has been enacted and tested on several occasions since its launch. Our experiences have taught us that there is a significant service that the Federal Executive Board provides to our members during what I call perceived emergencies.

For example, we learned a lot during the Democratic National Convention that took place in Boston in July 2004. It was to be the first National political convention since the 2001 terrorist attacks and the event was designated as a National Special Security Event (NSSE) in May 2003. An NSSE is defined as "an event or gathering of national significance; a potential terrorist target that requires Federal counter-terrorism capabilities." *(See attached After Action Report.)*

An event of this National stature was expected to draw protest organizations both organized and ad hoc. Organizations were rumored to be planning for civil disobedience and the increased security measures, which included major road closures, could be disruptive in the community.

The Federal Executive Board represented the interests of the Federal workforce during the year-long security planning and also during the event itself. Although the event experienced no real threats or disruptions, there were several cases where rumor and innuendo threatened public safety. For example, on the evening before the opening ceremonies, when many high-profile political leaders, delegates and families had descended upon the city, local media reported that a small aircraft had been seen entering the secure airspace over the event venue, which was in direct proximity to a major Federal building, and that someone had parachuted out of it and evaded security. Citizens and employees were already anxious and this report added to their anxiety.

The Federal Executive Board stepped in during the late evening hours and coordinated the collection of real-time information from subject-matter experts within our Federal law enforcement community. We were able to quickly disseminate facts and recommendations from the public safety community. This decreased the anxiety and provided local Federal agency leaders with accurate, consistent and up-to-date information to make decisions impacting the safety of the Federal workplace and ensured that the essential business of government continued.

We have since shared our After Action report, chronicling our year-long experience, with the US Office of Personnel Management, and both Denver and Minnesota, respectively, in preparation for the National conventions in 2008.

On January 25, 2005, local media outlets reported that a group of Chinese terrorists had issued a specific and imminent threat to the Greater Boston area. Several were reporting from outside Federal sites, including local FBI offices and the Federal courthouses. (See attached article *FBI finds terror threat was fabricated*. January 26, 2005 Boston Globe)

Once again, the Federal Executive Board was able to quickly collect and share real-time information. Because it was during business hours, we were able to invite local Federal decision-makers to participate in an on-line discussion with the Federal Protective Service's (FPS) Regional Director who helped dispel rumors and outlined FPS' heightened alert measures. As a result, Federal managers were able to alleviate the fears of their employees and get back to work.

Later that year, we employed similar procedures, when, on July 7, 2005, Americans awoke to reports of a series of coordinated terrorist bomb blasts that hit London's transportation system during their morning rush hour. At 9:30am on that same day, in downtown Boston, two underground subway trains were involved in a minor collision. Already on high alert and not yet knowing the nature of the accident, dozens of police and fire personnel, and the Massachusetts State Police Casualty Unit, responded.

Although local public safety officials were quick to determine that there was no link to the London events, an intense flow of misinformation circulated quickly. Federal managers

grappled with determining what course of action was in the best interests of their workforce. The Federal Executive Board was called into action to coordinate information-sharing. (See attached *Accident on Green Line leaves 3 injured July* 8, 2005 The Boston Globe)

Lastly, and most recently, on January 31, 2007, Boston made headlines nationwide when a marketing scheme went wrong. During the morning rush hour, a total of 38 electronic devices, resembling "lite brite" toys, were placed in public locations around Greater Boston, including on bridges and in subway stations, to promote a movie. The suspicious devices sent public safety officials scrambling for many hours. Member agencies relied on the Federal Executive Board to collect and disseminate up-to-date, accurate and consistent information as the situation unfolded. (See attached *"Aqua Teen" Incident Begs Question: Have We Become Too Paranoid?* February 1, 2007 MTV Press)

Although these examples are specific to Boston, I can tell you that Federal Executive Boards nationwide all have similar stories. From information-sharing during large civic rallies to extreme weather events, Federal Executive Boards play a vital role in ensuring the safety of the Federal workforce and its customers. I believe that this information-sharing and communication role will be increasingly important during a pandemic, particularly given the likelihood of its extended timeframe and a widespread national impact.

TABLETOP EXERCISES, TRAINING AND OTHER NEEDS

Federal Executive Boards nationwide have been hosting interagency tabletop exercises featuring a host of scenarios, including a pandemic, for many years.

Minnesota led the way and developed a pandemic exercise that many of us have emulated. In Boston, more than 100 Federal agencies participated and the lessons learned spurred two additional educational forums, focusing on telework and workplace violence, respectively. Almost all Federal Executive Boards host Continuity of Operations (COOP) Working Groups or Emergency Planning Councils to provide technical assistance, training and education on a variety of COOP and emergency preparedness-related topics to Federal COOP and emergency planners. Most include State and local representatives.

Federal Executive Boards have the ability to fill gaps that currently exist. For example, Detroit hosted FEMA's COOP Training for the first time 3 years ago. They followed up with a pandemic tabletop exercise, a COOP Train-the-Trainer program, and then, just last week hosted a second pandemic exercise. Each had a significant interagency presence and assisted the Federal community at large with its individual planning efforts.

Honolulu-Pacific has made strides in relationship-building and is actively engaged with their State's Civil Defense component, representing their large Federal workforce. They've sponsored a variety of planning forums on emergency, health and safety issues.

Tragically, on April 19, 1995, with the bombing of the Murrah Federal Building, the newly created Oklahoma Federal Executive Board was placed on the forefront of this issue and demonstrated the Federal Executive Board's essential role in being there to assist the Federal

workforce in their time of need. They not only coordinated relief efforts for Federal workers and their families but also served as the liaison with the US Office of Personnel Management and other Administration officials on a myriad of issues, including pay and leave. These efforts continued years later when trials were held and with the execution of Timothy McVeigh. Oklahoma has also had its fair share of weather-related events in recent years, including devastating tornadoes.

Although we hope to never again be needed to assist in with the aftermath of tragic events such as September 11 or the Oklahoma City Bombing, the fact the Federal Executive Board's exist and have these extensive intergovernmental networks in place as well as the ability to disseminate essential information quickly, is a tremendous asset to the Federal workforce.

CHALLENGES

Federal Executive Boards continue be effective in this regard while overcoming recurring challenges. Many were captured in the May 2007 Government Accountability Office Report and, as reported, are being addressed by the US Office of Personnel Management, FEMA and our numerous funding agencies. The first step was the development of the business plan, which includes two lines of business. These have, in a short time, helped Federal Executive Board gain the attention or policymakers and increased credibility in their communities.

For example, Boston is currently a one-person office. Although historically we have received adequate support from our funding agency and member agencies, our ability to continue to provide 24/7/365 communication is questionable given our current staffing. Further, many Boston members are active with other Federal Executive Boards within their geographic area of responsibility, including New York and Newark. Members have an expectation that each of us will provide a uniform level of service and that is not always the case due to our varying resources. Further, currently, there is no correlation between the size of the Federal community, the complexity of the community served and the resources available to the resources of the area Federal Executive Board. Federal Executive Boards are not uniform in size and scope. Several, including Minnesota, New Mexico, Oregon and Oklahoma, are statewide where others cover a smaller, defined metropolitan area.

Lastly, Federal Executive Board staff has not yet been formally designated as "emergency personnel" and position descriptions and supervisory control vary depending on the funding agency's internal controls. Executive Director Positions vary between GS 12 to GS 14, or equivalent. This discrepancy in grade level presents its own set of challenges as the lines of business evolve and the role changes. Security clearance levels, which also vary dramatically, are likely to become an issue as the emergency preparedness, employee safety and security line of business evolves.

CLOSING:

Thank you, Mr. Chairman and Subcommittee members, for the opportunity to appear before you today. I am pleased to answer any question that you might have.

REFERENCES / ATTACHMENTS

I. ARTICLES

FBI finds terror threat was fabricated. January 26, 2005 Boston Globe
http://www.boston.com/news/local/massachusetts/articles/2005/01/26/fbi_finds_terror_threat_was_fabricated/

Accident on Green Line leaves 3 injured July 8, 2005 The Boston Globe
http://www.boston.com/news/local/articles/2005/07/08/accident_on_green_line_leaves_3_injured/

"Aqua Teen" Incident Begs Question: Have We Become Too Paranoid? February 1, 2007
http://www.mtv.com/news/articles/1551347/20070201/index.jhtml

II. REPORTS

Greater Boston Federal Executive Board Emergency Decision and Notification Plan
http://www.boston.feb.gov/emergency.asp

Greater Boston Federal Executive Board After Action Report: July 2004
"Workforce Planning for the 2004 Democratic National Convention: A National Special Security Event"

The Federal Workforce's Impact on Massachusetts: A Socio-Economic Report August 2007
http://www.boston.feb.gov/report.asp

Greater Boston Federal Executive Board Work Plan for 2007 December 21, 2006
http://www.boston.feb.gov/report.asp

FBI finds terror threat was fabricated
Tipster suspected of tie to smuggling

By Shelley Murphy, Globe Staff January 26, 2005

The FBI announced yesterday that an alleged terrorist plot against Boston has turned out to be a false alarm, putting to rest concerns that rattled the city last week.

The agency said there is nothing to a tipster's report Jan. 17 that four Chinese and two Iraqis, allegedly smuggled into the country from Mexico, had sought nuclear material and were headed to Boston to launch an attack.

One member of Boston's Anti-Terrorism Advisory Committee, who spoke on condition of anonymity, said investigators now believe that Jose Ernesto Beltran Quinonez, the alleged tipster, made up the threat in some sort of dispute over money in a smuggling operation he was involved in.

"It has been determined that the threat had no credibility," the FBI said in a statement released on its website. "There were in fact no terrorist plans or activity under way."

Agents from Mexico's Federal Investigation Agency located Beltran, 34, Monday in the Mexican border town of Mexicali, and he confessed to making the call, according to an official in the federal attorney general's office who spoke on condition of anonymity.

Beltran, a taxi driver in Mexicali described by his wife as an "unstable person," told agents that he had called 911 in California from his cellphone and "warned of possible terrorist attacks in Boston or New York," the official said. Beltran said he was under the influence of drugs and alcohol and had meant the call "purely as a joke," the official said.

Beltran denied that he was involved with a smuggling ring, the official said.

The allegation of a terrorist plot sent law enforcement officials throughout Massachusetts scrambling. Boston police, the MBTA, and other agencies went on high alert, and Governor Mitt Romney canceled plans to attend President Bush's inauguration to return home to reassure the public there was no need to panic.

It began when a man called the California Highway Patrol anonymously on Jan. 17 saying that he had helped smuggle the six over the border into California, and that they were planning to obtain nuclear material and launch an attack on Boston. He directed police to a package he had tossed over a border fence, containing three visas and an identity card for the four Chinese nationals, airline ticket stubs, and baggage-claim tickets containing additional names and information. He gave no information on the Iraqis.

From the beginning, authorities stressed that the tip came from an unknown source and was uncorroborated. But they asked for the public's help in locating the people in question.

On Wednesday, the FBI and US Attorney Michael J. Sullivan released the names and photos of the four Chinese nationals -- Zengrong Lin, Wen Quin Zheng, Xiujin Chen, and Guozhi Lin -- who were being sought for questioning.

The next day, the FBI said it was seeking an additional 10 people, including Beltran, for questioning in connection with the plot. On Saturday, the FBI announced that it had located one of those people, Mei Zia Dong, 21, at a US Customs and Border Protection facility in San Diego, where she had been since her arrest on Nov. 11 on an immigration violation.

The FBI said yesterday it no longer needed the public's help locating any of those who had been sought. It was unclear yesterday exactly who they were and whether they had been smuggled into the country.

But investigators believe that the smuggling ring was bringing in immigrants who come to the US seeking a better life and end up in low-level jobs, according to one federal official knowledgeable about the case.

Beltran was released yesterday and allowed to return to his house in Mexicali. He was required to remain accessible to authorities. The official from the Mexican attorney general's office could not say if Beltran will face charges and said the investigation will continue.

In a joint statement released yesterday, Sullivan and Kenneth Kaiser, the special agent in charge of the FBI's Boston office, said, "While we questioned the credibility of the source information from the very beginning, we were determined to run this out, as we always do, to ensure there was no threat to the city of Boston and the people of Massachusetts."

Joe Parris, a supervisory special agent with the FBI in Washington, wouldn't comment on whether the agency has located any of the remaining people sought for questioning, but said, "As a terrorism matter, we no longer have an interest in them."

The FBI said its criminal investigation into the alleged smuggling will continue. The agency has referred information about the possible smuggling operation involving the Chinese nationals to Immigration and Customs Enforcement, which is currently reviewing it, according to Lauren Mack, a spokeswoman for the agency in San Diego.

Massachusetts State Police Colonel Thomas Robbins, along with other state officials yesterday, welcomed the FBI's announcement, saying troopers who had been assigned to work on the threat could be used elsewhere.

"Although it was uncorroborated at the time, we obviously had to deploy manpower based on the information that was received," said Robbins. Even though investigators were skeptical, he said, "given the magnitude of the threat, we had to act on it right away, and knock it out of the water."

Laura Nicoll, a spokeswoman for Romney, echoed those comments, adding: "We are relieved that this has turned out to be unfounded."

Globe correspondents Marion Lloyd, Janette Neuwahl, and Madison Park contributed to this report.

Accident on Green Line leaves 3 injured
Riders evacuated after 2-train crash

By Lucas Wall, Globe Staff | July 8, 2005

Denise Teti, a saleswoman at Louis Boston, was standing on the steps of the venerable Back Bay clothier about 9:30 a.m. yesterday when she saw people suddenly coming out of the ground.

MBTA passengers were escaping out of the subway through a little-used emergency escape portal just steps from the front door of Louis.

"They were just, like, coming up from underground," Teti said.

Many in the Back Bay worried that Boston was under attack, given the terrorist bombings on the London transit system hours earlier. But the evacuation was the result of a Green Line trolley crash underground between Copley and Arlington stations.

Passengers on the two trains -- a B line train with about 150 riders aboard and an E line train carrying about 100, both traveling inbound -- described the accident as a jarring jolt.

The trains were about 350 feet west of Arlington Station when the E line train, which had two cars, struck the three-car B line train from behind. The crash caused the E line train to slightly derail.

"We were riding out of the Copley station and somewhere between Copley and Arlington there is this big boom and the whole car shakes," said Mary Skonicki, 22, a law student at Boston College.

Three train operators suffered minor injuries and were taken to hospitals; no passengers were hurt.

The cause of the accident remained under investigation yesterday evening. MBTA spokesman Joe Pesaturo said tests of the signal system revealed no problems, leaving investigators to focus on whether one of the trains malfunctioned or if operator error is to blame. Both trains were removed to a rail yard for examination.

Pesaturo said the T has not determined how fast the trains were traveling at the time of the accident.

Unlike the T's three other subway lines, the Green light-rail line -- which runs at surface level for most of its route -- has no automated control system. It's solely up to the operator to accelerate and brake.

Like automobiles, Green Line trains have red lights in the rear to alert approaching trains or other traffic of their presence.

Steve Nutter of Boston, riding in the front of the E line train, said he didn't sense any effort was made to stop as his car plowed into the B line train. "It was kind of strange because there was no braking involved," Nutter said. "At least that's what it felt like."

Passengers on the B line train were let off at Arlington Station. Stunned riders on the E line train sat for about 15 minutes before a conductor said they would try to back up to Copley Station, said Daniel Miller, a Northeastern University law student who was among those stranded. About five minutes later, Miller said, passengers were ordered off the train and told to walk single-file in the dark, narrow gap between the train and tunnel wall.

With firefighters leading the way with flashlights, the hundred or so riders stood against the wall. Then the escape hatch, one of seven in that stretch of Green Line tunnel, was opened. The evacuees climbed to the surface via an old cement stairway that led to a metal ladder.

Miller had read news accounts of the London bombings before he left for his summer internship. But until he saw the emergency vehicles surrounding Arlington station, he said, he never gave terrorism a second thought.

"Everyone just seemed to be irritated," he said. "It just seemed like another delay on the Green Line."

Though this was only the second collision between trains in the past two years -- the last, also a rear-end crash, occurred in November -- the Green Line has been plagued by other problems. Heavy rain that created a fear of flooding closed a subway tunnel used by the Green Line's D branch during Wednesday's peak commute, forcing thousands to wait for shuttle buses. Other incidents included faulty new cars that have derailed nine times in recent years. Yesterday's crash did not involve those Breda cars.

The MBTA would not identify the operators driving the two trains involved in the accident. Pesaturo said the driver of the B line train has six years of service while the E line train driver has 19 years of experience.

"Having known this motor person for his whole career, I find it highly unlikely that it's operator error," Steve MacDougall, president of the Carmen's Union Local 589, said of the E train driver.

Green Line service was disrupted between Kenmore and Park Street stations until 1:05 p.m., Pesaturo said. Numerous buses were dispatched to ferry stranded passengers along the route. The second service interruption in as many days left some commuters exasperated. At Park Street, confused passengers were sitting on an outbound train for a half-hour, until they figured out they needed to exit and find a shuttle bus outside.

"It was crazy," said David Dow. "All the trains were open, we were just waiting, but no one told us what was going on."

Lucas Wall can be reached at lwall@globe.com. Mac Daniel and John Ellement of the Globe staff and correspondent April Simpson contributed to this report. ■

'Aqua Teen' Incident Begs Question: Have We Become *Too* Paranoid?

Boston is still mopping up from the Wednesday bomb scare/ Mooninite fiasco that virtually shut down the city. Police were called to diffuse a bunch of devices that turned out to be home-cooked, Lite-Brite-like promos for the cartoon "Aqua Teen Hunger Force."

The massive effort to find and destroy the profane, bird-flipping promos dominated afternoon coverage on major news networks. It also led to a pair of not-guilty pleas on Thursday morning (February 1) from the two starving artists who planted the 38 devices as part of a 10-city guerilla-marketing campaign for the popular "Adult Swim" show's new season.

Boston city officials were enraged by the stunt, which included devices planted under bridges, near storefronts and outside Fenway Park. One of them was discovered by a transportation worker, who found it affixed to an interstate ramp in the early morning. That set off a chain reaction of calls about similar devices. City officials are also considering charging Turner Broadcasting System Inc. — which is the parent company of the Cartoon Network, home to "Aqua Teen" — between $500,000 and $1 million to cover the cost of the response. Given the massive effort, we wondered if — in light of the hundreds of false alarms called in every week around the country in the years since 9/11 — have we become *too* paranoid?

"I think it was the right reaction," said Ed Clark, former director of the Homeland Security Threats Office and Special Forces veteran. "We've accomplished the first phase of educating the American public in what they're required to do. We can't make the assumption that everything will be all right anymore." If nothing else, Clark said the response to the botched promo campaign was another opportunity for officials to get real-life, in-the-field experience.

Clark, who teaches a course on how to recognize suspicious devices, said he was encouraged that citizens called in the moon men. But even he admitted that it was not likely that a "transnational Islamic group would put a cartoon character flipping the bird" on an explosive device if they were serious about inflicting harm.

Russ Knocke, a spokesperson for the Department of Homeland Security, also praised authorities for their quick response and attempts to keep the public appraised of the situation. He said the stunt was just one of dozens of similar everyday incidents that are investigated and turn out to be false alarms. "Prior to the incidents in Boston, there were three or four [false alarms] around the Washington, D.C., area before noon," he said. "We need the public to be vigilant if they see something abnormal."

Then again, the devices sat around in Boston, the city's surrounding areas and nine other major cities for weeks without anyone calling in to report them. So does the Beantown bust really mean we're more or less vigilant? Have we even learned a lesson about what kinds of things are suspicious and what's probably a prank?

"Someone sent in a picture from another city at least a week ago," said Mark Frauenfelder, who runs the technology-project magazine and Web site *Make,* which posted images of one of the objects found by a user on January 17. "If the city wants to make Turner pay $675,000 for this, that's a cheap ad for the amount of publicity they're getting off of it. Everyone will TiVo 'Aqua Teen' now, even people who've never heard of it. This is the kind of publicity that could turn it into the next 'South Park.' "

Frauenfelder said he loved the "brilliant little signs" and said they were fun to look at and couldn't see how anyone but the most paranoid person would find them anything but innocuous. "A colored, lighted-up cartoon character displayed in plain sight goes against every rule for planting a bomb," he said. "Usually these things are concealed in a box or on a bomber's body and they're not laid out in plain sight like ads."

And while Frauenfelder thought it was a good sign that authorities responded when the devices were found, the fact that they went unnoticed in the other major cities for two weeks struck him as a serious failure on the part of Homeland Security. Whether they prove that we're too paranoid or simply more alert than in the past, the Mooninites certainly did their job. "They made the evening news everywhere, and it very successfully tapped into everyone's zeitgeist about being afraid of terrorism, so in that sense it worked," said Lucian James, founder of Agenda Inc., a marketing-strategy company. He likened the huge reaction to a similar, less-intense flap over a street promotion last summer for "Mission: Impossible III" that involved music boxes with dangling wires that played the movie's theme song and were placed inside newspaper boxes.

"The goal of guerrilla marketing is to break through the clutter, but the problem is that the clutter is created by attempts like this that go wrong or blur the consumer's mind, and you have to create ever-increasing ways to do it," James said. "It's a little stupid I guess, but did they do it deliberately? Probably not."

Turner Broadcasting System Inc. apologized for the campaign later in the day, saying in a statement, "We really deeply regret that it was horribly misinterpreted to be a public danger, when all it was intended to do was to draw attention to a late-night television show. This is not the kind of publicity we would ever seek."

And while city officials were understandably peeved about the expense, hassle and endlessly looped images of bomb-suit-wearing specialists exploding and pressure-hosing profane pixel figures, some Bostonians seem to have taken it in stride — their sarcastic sense of humor intact. There were reports that some subway riders in the city were greeted Thursday morning by kids handing out posters with pictures of Mooninites on them reading: "1-31-07, NEVER FORGET." And someone from Brighton, Massachusetts, was already selling a commemorative T-shirt on eBay less than 24 hours later featuring a finger-flipping Mooninite and the words, "Up Yours Boston."

Greater Boston Federal Executive Board (GBFEB)
EMERGENCY DECISION AND NOTIFICATION PLAN

Part I: OUTLINE AND PURPOSE:

When an emergency exists, Federal agencies need to react responsibly and in unison to protect the well being of the Federal workforce and its customers. This *Emergency Decision and Notification Plan* (herein referred to as the Plan) outlines the GBFEB's procedures, identifies responsibilities and provides interagency communications strategies for use by Greater Boston Federal Agency leadership for workforce planning purposes. It also provides guidelines on designating emergency personnel and pay and leave policies as developed by the US Office of Personnel Management. The Plan was developed by a representative multi-agency Working Group for Greater Boston Federal agencies.

Part II: FEDERAL EXECUTIVE BOARD AUTHORITY:

Federal Executive Boards were established on November 13, 1961 by Presidential Memorandum. As outlined in *Part 960 of Title 5 of the Code of Federal Regulations*. "Federal Executive Boards shall be responsible for... emergency operations, such as under hazardous weather conditions, responding to blood donations needs, and communicating related leave policies." (Reference: 5 CFR Part 960.107.)

Subsequent policy memorandums issued by the Director, US Office of Personnel Management have requested that Federal Executive Boards nationwide play a critical role in emergency preparedness and response from a workforce planning perspective in their communities. (Reference: August 15, 2003 Director James Memo)

As a central management agency of the United States Federal government, the US Office of Personnel Management includes Federal Executive Boards in its national communications plan during times of national and local emergencies. Their plan calls for "immediate notification of changes to the operating status of the government to ....Federal Executive Boards and other key Federal and local authorities..." (Reference: Federal Manager's Decision Maker's Emergency Guide. 2002 available at www.opm.gov)

At this time, the GBFEB's role in emergency decisions and notifications is that of providing a "recommendation" based on up-to-date, consistent and accurate information. In addition, the US Office of Personnel Management and the US Department of Homeland Security at the headquarters level have identified the FEB network nationwide as an integral resource for information about government-wide operations following an emergency. (Reference – February 14, 2002 Memo)

Part III: SCOPE

Although each Federal agency is responsible for the safety of its employees and the Continuity of Operations, this Plan assists Federal agencies with obtaining and coordinating relevant information that can be readily shared among Federal agencies and used for decision-making

relative to the Federal workforce. It will also ensure that Federal employees and the general public are provided with consistent and accurate messages.

Information gathered pertains to the employee's official duty station and not the employee's home or telework location.

This Plan is relevant for all executive agencies located in the Greater Boston area (defined as inside I-495.) Facilities outside Greater Boston may prefer to develop their own plans since they are subject to different conditions.

GBFEB recommendations DO NOT pertain to agency personnel who have been designated as "emergency."

Recommendations pertain to Agency operations and employees only. The GBFEB DOES NOT close Federal buildings or facilities.

The Plan does not apply to private sector entities, including contractors.

The Plan does not replace Federal agencies' individual emergency plans or building occupant emergency plans but rather complements them and serves as a resource for information-sharing and uniform decision-making. The Plan was developed to mirror the procedures cooperatively outlined by the US Office of Personnel Management, the US General Services Administration and DHS / FEMA in the "Federal Workforce Release Decision and Notification Protocol" for the National Capitol Region.

Part IV: GOALS AND RESPONSIBILITIES:

Greater Boston Federal Executive Board Responsibilities:

The GBFEB's goal is to provide area agency heads with accurate, consistent and up-to-date information to assist them in making informed decisions. This includes information available from local public safety and law enforcement officials as well as Administration and US Office of Personnel Management policies. The GBFEB issues its recommendations based on a coordinated approach and in consultation with the necessary local experts and GBFEB leadership.

EMERGENCY WEATHER CONDITIONS:

The GBFEB makes a *recommendation* regarding the curtailment of Federal operations (i.e. late arrival, early dismissal, closure) during emergency weather both during and after hours. This recommendation is made in consultation with principal parties who contribute vital information on such things as long-range weather forecasts and accumulation totals, transportation and traffic, state and local operations, and other pertinent public safety information. Parties involved include the GBFEB Chair and Executive Director, the US Coast Guard 24 Hour Operations Center, National Weather Service, FEMA, GSA and the Federal Protective Service.

Recommendations are available to agency heads so that informed decisions can be made. This prevents agency decision-makers from relying strictly on media reports.

The Greater Boston Federal Executive Board will maintain 24/7/365 contact information for all local agency heads and distribute the information via the USP3 communications system. USP3 enables the FEB to communicate with its members simultaneously via email, text page and/or telephone.

OTHER EMERGENCY SITUATIONS:

Building on our weather-related experiences, the GBFEB developed an "all hazards" strategy to assist with convening the key Federal, state and local officials necessary to make informed recommendations during other types of local or national emergency situations. The GBFEB Emergency Decision and Notification Committee, chaired by the First Coast Guard District Commander, will assess each situation on a case-by-case basis and convene appropriate experts and agency officials. Collectively, recommendations regarding the status of the Federal workforce will be made as appropriate both during and after hours.

Examples of emergency situations include all types of manmade or natural disasters and terrorist threats or incidents. FEBs nationwide have provided critical information and guidance to their Federal communities in recent years for such things as the Florida hurricanes in 2004, Northeast power outage in 2003, large anti-war and other protests at Federal facilities in 2003 and 2004. During the Democratic and Republican National Conventions, both designated as National Special Security Events, held in Boston and New York City, respectively, in the summer of 2004, OPM relied heavily on the FEBs to communicate with the local Federal leadership in advance and throughout the events. For these events, OPM appointed a "designated official" in each host City who was empowered to make final decisions relative to the status of Federal operations should an emergency arise. OPM continues to rely on FEBs to serve as their local presence.

Following the GBFEB recommendation, the agency head can then make a final decision regarding the status of operations within the agency.

NOTIFICATION PROCESS:

The GBFEB collects and maintains a database of emergency contact information for each local agency head and their deputy or other designated official for use in the event of a widespread emergency during work and/or non-work hours. This information is used only in the event of a widespread local or national emergency The GBFEB Chair, Vice Chair and Executive Director will hold this information securely at all times.

Participation in this notification process is voluntary. In order to ensure and maintain an executive-level exchange, communications are designed for Federal agency heads, deputies or designated alternates only. The designated official should have decision-making authority relative to the Federal workforce. Each agency is requested to submit a minimum of two points of contact.

NOTE: it is not appropriate to delegate this agency responsibility to Facilities or Building Managers, COOP planners, or contractors and other non-Federal employees.

Notifications will be activated by collective agreement among the GBFEB leadership and only during those cases deemed as emergency. Scheduled and spontaneous tests will take place throughout the year on all systems to ensure that they are working.

NOTIFICATION MECHANISMS:

The GBFEB has the ability to communicate via several different mechanisms to ensure not only an up-to-date and consistent message but expedience and accuracy.

UNITED STATES PUBLIC PRIVATE PARTNERSHIP (USP3.ORG): Effective June 2007, the FEB network is included in the USP3 communication system as maintained by the Federal Bureau of Investigation. USP3 enables us to communication with our members via email, text page and telephone, and also has a live chat capability. This web-based system requires no special software and can be activated from any computer. USP3 also enables FEBs to communicate with one another and with OPM officials.

DEDICATED VOICE MAIL LINE:
The GBFEB maintains a one-way dedicated voice mail line that allows Federal agency heads and their designated alternates to call-to listen to the GBFEB recommendations. Executives may also call the GBFEB's main office telephone line. This system will continue to be used during weather-related emergencies.

MEDIA ANNOUNCEMENTS: The GBFEB will utilize the local media to announce recommendations as needed.

SUMMARY:

The GBFEB WILL:

Strive to provide Agency heads with accurate, up-to-date and consistent information so that informed decisions can be made about agency operations;

Continue to use dedicated voice mail line and designated media venues to issue emergency weather (i.e. snow) recommendations. Other mechanisms will not be activated unless under extremely abnormal circumstances – hurricanes, tornadoes, etc.

Maintain a database of emergency contact information for local agency heads and their designated alternates and update on a quarterly basis;

Facilitate communication with agency heads via USP3 when deemed appropriate by GBFEB leadership;

Serve as the Federal liaison with Commonwealth of Massachusetts and City of Boston Emergency Management and law enforcement officials (for workplace purposes ONLY; NOT first response.)

The GBFEB will provide regular status reports to the US Office of Personnel Management's 24 Watch Center (202-418-0111) and DHS / Federal Protective Service's 24 hour Mid Atlantic Mega Center (800 525-5726,) when necessary;

When appropriate, serve as the media focal point in responding to inquiries about the status of Federal operations locally;

Distribute US Office of Personnel Management, Administration and other guidance as appropriate;

The GBFEB WILL NOT:

Close Federal buildings or Federal facilities;

Speak on behalf of any individual Federal agency (to the media, Federal employees or the general public.)

Have final decision-making authority regarding the status of a Federal agency's operations.

Designate "emergency" employees

Agency Head Responsibilities

In advance of these emergencies, each agency should designate an individual who is empowered to issue their agency orders and how they will be administered within each agency.

Agency heads should submit emergency contact information for the senior agency official and at least one designated alternate for the GBFEB electronic communications systems quarterly.

Utilizing the GBFEB's recommendation, each individual agency head is responsible for making the decision about the operating status of his or her agency and for communicating that decision to his or her employees. Application of this guidance should be consistent with the provisions of applicable collective bargaining agreements or other controlling policies, authorities and instructions.

Part V: OTHER AGENCY ROLES:
(Relative to THE PLAN; NOT first response)

DHS / Federal Emergency Management Agency (FEMA):
To ensure continuity, FEMA is an ex officio member of the GBFEB Board of Directors. The GBFEB will work cooperatively with FEMA, and be represented at FEMA's regional operations

center, when appropriate. FEMA also provides technical assistance for the development of agency COOP plans.

DHS / First Coast Guard District (USCG):
The USCG currently serves as an ex officio member of the GBFEB Board of Directors and leads the GBFEB Emergency Decision and Notification Committee. With the assistance of the Coast Guard's 24-hour command center, the Committee is able to convene appropriate parties during work and non-work hours, to gather pertinent information to collectively make a recommendation related to the status of Federal operations. This is typically done via conference call. Situations other than weather will be assessed on a case-by-case basis.

DHS / Federal Protective Service (FPS):
The FPS Regional Director serves as an ex officio member of the GBFEB Board of Directors and currently chairs GBFEB Homeland Security Committee (est. 2002.) With assistance from its 24-hour Mega-Center, FPS provides the GBFEB with critical information during times of emergency, including traffic patterns, transportation difficulties and local states of emergency. FPS facilitates communication via the secure web portal and serves as our link to the *Joint Terrorism Task Force* for the gathering and distribution of non-intelligence related information.

As part of its routine efforts, FPS provides proactive security assessments through their Federal Security Risk Assessment Program by conducting periodic vulnerability studies and developing countermeasures to reduce risk. Reports are presented to the respective Building Security Committees. Under the Homeland Security Act of 2003 that FPS is responsible for security at ALL Federal facilities. Federal agencies in buildings not managed by GSA should contact the FPS directly for emergency preparedness or threat assessment information.

General Services Administration (GSA):
As the landlord and a central management agency of the civilian Federal government, GSA is an integral component of our communications system. GSA holds an ex officio position on the GBFEB Board of Directors. *It is GSA alone who determines the "closure" of GSA buildings.* Keep in mind that during certain situations, including inclement weather, individual Federal agency tenants may choose to curtail its operations but buildings can remain "open." Additionally, GSA communicates with individual building tenants and other facilities staff when there is a critical incident specific to building. (e.g. maintenance problems)

GSA, not Federal Executive Boards, hosts "Building Security Committees (BSCs)" based on a 1995 US Department of Justice recommendation published in the "Vulnerability Assessment of Federal Facilities." BSC membership should include at least one representative from each agency housed within a Federal building. It is recommended that the Agency with the largest presence in the respective building chair the BSC. BSC members will act for the Agency Head allowing them to recommend building security countermeasures. It is recommended that the Agency select a representative with decision-making authority as the implementation of certain measures may impact rent.

GSA provides technical assistance for the development of agency Continuity of Operations Plans (COOP) across the Region.

For more information or to comment on the Greater Boston Federal Executive Board's Emergency Communications Plan, please contact Executive Director Kim Ainsworth at 617-565-6769 or kim.ainsworth@gsa.gov

AGENCY HUMAN RESOURCES GUIDANCE ADDENDUM

At least annually, Federal agencies should identify employees who must report for work and continue government operations during a disruption of operations and notify them in writing that they are designated as "emergency personnel" (5 USC Sec 7106). The notice should include the requirement that emergency employees report for or remain at work when operations are disrupted and an explanation that dismissal or closure announcements do not apply to them unless they are instructed otherwise.

Agencies must be aware that those positions identified as "emergency" may vary depending on the emergency situation. An agency's response can depend on the nature of the emergency, nature of agency mission and the emergency location. There can be different categories of emergency personnel. If an agency determines that a situation requires employees not designated as emergency employees to report for or remain at work when operations are disrupted, the agency should establish a procedure for notifying them individually.

Agencies continue to have discretionary authority to grant a reasonable amount of excused absence (without charge to leave or loss of pay) for individual hardships or circumstances unique to an employee. For example, factors such as distance, availability of transportation or childcare / eldercare alternatives may be considered. The official US Office of Personnel Management guidelines for supervisors to make these decisions can be found on their web site at www.opm.gov under "Emergency Dismissal or Closure Procedures for Federal Employees" and the Code of Federal Regulations, Title 5, Chapter 1, Part 610, Subpart C – Administrative Dismissals. Although Federal managers have the discretion to offer "excused absences" to individuals or groups of employees for some emergency situations, it is not an entitlement. Each agency makes its own determinations on a case-by-case basis.

At least annually, agencies should provide written procedures for dismissal or closure to employees. The guidance should include information explaining the notification process.

Agencies are responsible for developing and maintaining a Continuity of Operations Plan. (COOP) The COOP provides guidance for, and facilitates the preparation of, site specific plans and procedures that help ensure the safety of their agency personnel. The COOP outlines how the organizational elements will continue essential operations in the event of an emergency or threat.

GBFEB recommendations for curtailment of government operations DO NOT pertain to agency personnel who have been designated as "emergency."

Federal agencies in GSA-owned and leased space, particularly multi-tenant sites, should identify an employee with decision-making authority to represent the agency on GSA's Building Security Committees.

ADDENDUM: GUIDANCE FOR EMPLOYEES

Employees should contact their agencies to request annual leave, leave without pay, and/or use of earned compensatory time off or credit hours when an "unscheduled leave" policy is announced. Agencies should notify their employees of the procedures for making such requests.

Employees must be aware that those positions identified as "emergency" may vary depending on the emergency situation. An agency's response can depend on the nature of the emergency, nature of agency mission and the emergency location. There can be different categories of emergency personnel.

Employees are encouraged to familiarize themselves with the procedures that have been put into place at their agency, as well as the means of notification that an agency will use to inform and instruct employees.

GBFEB recommendations for curtailment of government operations DO NOT pertain to agency personnel who have been designated as "emergency."

Employees are encouraged to develop personal family plans for use during times of emergency. These plans should outline *in advance* what should be done an emergency. Be prepared to assess the situation, use common sense and whatever you have on hand to take care of yourself and your loved ones. Think about the places where your family spends time: school, work and other places you frequent. Ask about their emergency plans. Find out how they will communicate with families during an emergency. If they do not have an emergency plan, consider helping develop one. The US Department of Homeland Security hosts a web site to provide guidance to the general public for all sorts of emergency situations. (Source: www.ready.gov)

Federal Workforce Planning for the 2004 Democratic National Convention: A National Special Security Event

A report by the Greater Boston Federal Executive Board

BACKGROUND OF THE EVENT: The Democratic National Convention Committee awarded the Democratic National Convention (DNC) to the City of Boston on November 13, 2002. From the earliest stages, local, state and Federal officials projected that it would be beneficial for the overall economy of the City but agreed that it would present unique law enforcement and public safety challenges. The event was scheduled for July 26-29, 2004 at the Fleet Center in Boston's North Station area.

From the beginning, the event, and its security plan, was expected to significantly impact the entire City, including the more than 150 Federal agencies and 46,000 Federal employees in the Greater Boston area. 18,000 Federal employees work in the Boston Metropolitan Statistical Area. In addition to the potential for commuting disruptions, safety and security was an obvious issue. There are a number of Federal buildings and facilities located in the Boston Metro area and within walking distance to the Convention venue. These include the multi tenant facilities like John F. Kennedy, O'Neill and Williams Federal Buildings, the Moakley and McCormack Courthouses, Boston National Historical Park, the US Coast Guard Integrated Support Command, EPA at One Congress Street, VA Medical Center Clinic and miscellaneous others. NOTE: The O'Neill Federal Building is adjacent to the Fleet Center.

NATIONAL SPECIAL SECURITY EVENT (NSSE): In May 2003, Governor Romney, as the senior official of the host state, requested that the event be designated as a "National Special Security Event (NSSE)" as is permitted by 1997 President Directive 62. Homeland Security Secretary Governor Tom Ridge awarded the NSSE designation on May 27, 2003. A NSSE is defined as "an event or gathering of national significance; a potential terrorist target that requires Federal counter-terrorism capabilities." The NSSE designation outlines the following roles and responsibilities for Federal Agencies: *(See ADDENDUM: USSS August 13, 2003 powerpoint presentation for complete explanation of security and planning role)*

- US SECRET SERVICE: Lead Federal Agency for the Preparation and the Implementation of the Security Plan;
- FEDERAL BUREAU OF INVESTIGATION: Lead Federal Agency for Crisis Management

- FEDERAL EMERGENCY MANAGEMENT AGENCY: Lead Federal Agency for Consequence Management

US Secret Service Special Agent Scott Sheafe was named as the DNC Coordinator and began working on the security, planning and implementation full-time in May 2003. This included designing and developing the Steering Committee, building relationships and partnerships, identifying and acquiring resources, etc. Other NSSE's during 2004 included the President's State of the Union Address in January, the G-8 summit in Georgia in June and the Republican National Convention in New York City in August, respectively. (See APPENDIX: July 2004 Government Executive article about Scott Sheafe.)

FEDERAL WORKFORCE PLANNING: The Greater Boston Federal Executive Board (GBFEB) became involved early on in the planning process representing the Federal community at-large. The US Secret Service invited Executive Director Kim Ainsworth to join their Steering Committee's VENUE SUBCOMMITEE. Our anticipated role was NOT one of first response or law enforcement but rather from a *workforce planning* perspective. It made sense because the Federal government is among the largest area employers.

SCOPE OF EVENT: More than 35,000 delegates & their families, national and local elected officials, other VIPs and protest groups were expected for the event. Those numbers increased with international media, construction and other planners, arriving well in advance. Beyond the convention agenda itself, there were more than 1,000 delegation parties and special events scheduled throughout the City during the week.

An event of this national stature was expected to draw protest organizations both organized and ad hoc. Anarchist organizations were rumored to be planning for civil disobedience. Litigation following the 2000 Democratic National Convention in Los Angeles required City officials and event planners to allot a designated area "within sight and sound of the delegate's arrival" for expression of first amendment rights. The City would issue permits for the use of the public address system but none was necessary for a simple presence at the site. Additionally, spontaneous disruption by the less formally organized would be a potential issue. The Federal workforce was particularly concerned with City Hall Plaza, a favorite spot traditionally for rallies, protest marches and demonstrations. The JFK Federal Building is adjacent to City Hall Plaza.

The US General Services Administration, in cooperation with the US Secret Service, determined early on that it was in the best interests of public safety and security to close the O'Neill Federal Building to the public during the Convention week. All other Federally-owned buildings, leased space and facilities in the area were expected to be open for normal business hours.

ADDITIONAL SECURITY: In June 2003, Governor Ridge elaborated on the US Secret Service's role specifically relative to security of special sites, assets and significant area landmarks in both Boston and New York City, respectively. (I.e. JFK Library, Hanscom Air Force Base, Boston National Historical Park, Fenway Park.) This was done because some sites requested an increased Secret Service or police presence to assist with their additional security measures anticipated for the week. Governor Ridge outlined that the Secret Service would be charged with the security of the Convention venue only as well as with their traditional protection role for VIPs (i.e. former Presidents Carter and Clinton and Senator Clinton.) He further elaborated that the Boston Police Department would lead and provide security in and around the City for events, traffic management purposes, civil unrest, etc., in cooperation with their state and local partners as defined in the security plan. NOTE: Private sector entities and buildings would largely be responsible for developing their own site plans and providing for additional security if they felt it necessary.

KEY FACTORS / CHALLENGES: The DNC 2004 was to be the first political convention in the post 9-11 arena. This raised new issues relative to the Federal workforce and the Federal government's responsibility to ensure the safety and security of employees while ensuring that essential government services are delivered. The world is a different place in 2004 than it was just fours years ago with active terrorist threats and ongoing conflicts in Iraq and Afghanistan. Further, Madrid, Spain suffered great loss on March 11, 2004 with a terrorist attack on its commuter rail system killing more than 200 people. Terrorism continued to be a real and constant threat internationally. As a result, the security would require much more careful thought and consideration of "new" factors. As explained by Special Agent Sheafe during one briefing, during the Democratic National Convention in New York City in 1992, a person was able to take a cab and be dropped off directly in front of Madison Square Garden, the event venue. This is unheard of in this day and age.

Boston has many unique geographic challenges, some relating directly to the Fleet Center's location. Boston is a fairly compact "walking" city with major waterways, a public transportation system and an interstate running directly through its center. All are also a short distance from the venue itself. Thrown into the mix is the fact that in early 2004, it became likely that the event would host a "hometown" nominee as Massachusetts Senator John Kerry became the presumptive democratic nominee for President of the United States.

The individual event delegations were allotted hotels in and around the city. Unlike Los Angeles and others where host hotels were sometimes 30 – 40 miles from the venue, the farthest distance from a host hotel to the Fleet Center was just 13 miles.

Special Agent Scott Sheafe deserves credit for embracing the potential role of the GBFEB early. Additionally, Special Agent in Charge Steven Ricciardi encouraged his Boston Field Office staff to provide executive briefings for Federal agencies and to maintain open lines of communication among the workforce on an ongoing basis. This proved to be extremely beneficial and agencies realized the importance of planning early. They also realized the need for the plans to be "fluid."

GREATER BOSTON FEDERAL EXECUTIVE BOARD: WHAT WE'VE DONE

The GBFEB took the security and planning stages seriously for many reasons, including those already cited. "Agency Planning for the Democratic National Convention" became a regular topic at our monthly Board of Directors meetings beginning in August 2003. *(See APPENDIX for meeting agendas and minutes.)* In addition to three executive briefings by Special Agent Sheafe, we aimed to share lessons learned and pertinent information among local agencies. It was beneficial to learn what others were planning in order to make effective decisions. It was imperative for Federal agencies to understand that much of the security plan was fluid and would be based on such things as the status of various construction projects across the City in the future.

A number of our GBFEB members, including the USDA / Food and Nutrition Service, National Archives and Records Administration, the US Department of Labor and the US Coast Guard, cover locations in New York City as part of the New England / Northeast Region. These members especially appreciated our guidance and implemented many of our plans in their New York field offices. Others, including EPA New England, actively shared their information with their New York counterparts and encouraged a proactive approach in that location as well. Although New York City is a different culture and is more accustomed to events of this magnitude, we felt it was a necessary and useful function in this "new" time.

As stated, the US General Services Administration agreed early on to "close" the O'Neill Federal Building to the public during the Convention week. Although Federal employees would be allowed access, agencies were respectfully requested to significantly decrease the number of employees who would be on site during the week. Those identified as emergency / essential employees would be credentialed and subject to search upon each entry to the perimeter and exit of the building. The decision as to who was designated as essential / emergency was left to the discretion of each tenant agency. As time passed, and plans for road and public transportation closures progressed, Public Safety officials across the State set a goal of reducing the overall number of commuters on the roads during the convention week by 50% and set out on an active public awareness campaign.

The GBFEB's primary goal in all emergency situations, including this special event, is to ensure that all Federal agencies receive accurate, consistent and up-to-date

information to make informed decisions. Our experience has been that rumors and misinformation among the rank and file often drive controversy and disruption. Media coverage (or lack there- of) of an issue or incident often complicates even small issues. Federal employees, and many Federal employee unions, especially those with duty stations in the O'Neill Federal Building, began lobbying their leadership for widespread use of administrative leave almost immediately upon the announcement of the DNC.

In September 2003, Executive Director Kim Ainsworth submitted an official request to US Office of Personnel Management (OPM) Director Kay Coles James requesting guidance for Federal agencies relative to special events citing many of these issues. Federal agencies were beginning to look for guidance from the Federal Executive Board because of our traditional role of making "recommendations" relative to emergency situations and frankly, it made sense. This type of emergency preparedness was, however, a new and evolving role for us. (*See ADDENDUM September 19, 2003 letter to Director James.*)

Our Board of Directors felt strongly that the GBFEB had the responsibility to represent the Federal community at large and fill voids that exist with the absence of a local Office of Personnel Management (OPM) office. Additionally, we recognized that our role had the potential to have a national impact. DHS / Federal Protective Service Regional Director Ron Libby noted: "As a nation, we are moving away from the "meadowlands" concept. More and more cities are building major convention and sports arenas in the heart of cities. This will certainly impact security, and the Federal workforce, at different times and at many different levels."

From the start, the GBFEB encouraged agencies to balance workplace and employee safety with continuity of government. Our Board of Directors collectively felt that widespread use of administrative leave was neither prudent nor realistic. Essential government services needed to continue despite the inconveniences that an event of this magnitude may cause. However, Federal agencies needed to factor in variables like the potential for civil unrest or an emergency response. We strongly encouraged that agencies work in partnership with their respective unions and reference collective bargaining agreements.

In a joint letter dated January 7, 2004, to the New York and Boston FEB's, OPM Director James supported the goal of curtailing government operations as little as possible during the political conventions and encouraged agencies to utilize personnel flexibilities available for pre-planning. The letter outlined existing guidelines for such things as unscheduled leave, flexible work schedules, telework and alternate sites. Further, the letter offered examples of the Federal government's efforts during other special events and cases of widespread civil unrest in other parts of the country. The GBFEB distributed this guidance in

numerous ways and frequently to our more than 150 area Federal agencies. It set a useful framework for area agencies. *(See ADDENDUM: January 7, 2004 Letter from Director James)*

In March 2004, Executive Director Kim Ainsworth sent official requests to both the United States Office of Special Counsel and the White House Counsel requesting an official read on the Hatch Act and political activity relative to political conventions. Numerous volunteer opportunities were being publicized by the both the Host Committee and the Democratic National Convention Committee. Additionally, with more than 1,000 delegation parties, fundraisers and other special events scheduled to take place around the City, there was the potential for Federal employees to be offered free tickets or admittance. *(See ADDENDUM: March 22, 2004 letter to Special Counsel)*

In a response letter dated May 27, 2004, US Office of Special Counsel Hatch Act Branch Chief Ana Galindo-Marrone provided appropriate guidance for Federal employees. This was distributed in numerous ways and frequently to our more than 150 area Federal agencies. *(See ADDENDUM: Letter from Office of Special Counsel)* NOTE: Following several follow up phone calls, the White House Counsel declined to offer guidance as to attendance and acceptance of tickets relative to a political convention.

Executive Director Kim Ainsworth began providing executive briefings for Federal agencies upon request, including regular visits to EPA New England's weekly managers meeting, the US Department of Labor's monthly Executive Council meeting and the quarterly New England Federal Personnel Council meeting. Again, our goal was to ensure that local Agency executives were informed with accurate and up-to-date information. These briefings continued throughout the year and developed into a "road show" of sorts with DHS / Federal Protective Service and GSA participating as a team effort. Our proactive approach continued.

In February 2004, the GBFEB hosted an information session for Federal executives and industry partners featuring the Democratic National Convention Committee's Director of Operations Mr. Cameron Moody. Mr. Moody outlined the anticipated economic impact of the Convention for the City of Boston and the reasoning behind many of the security and planning choices. (In the week's prior to this session, it was rumored by media reports that the DNCC was planning to move the venue to Boston's new Convention Center in South Boston.) The session drew more than 100 Federal executives and industry partners.

The GBFEB began participating in monthly "NSSE briefings" hosted by GSA for the tenant agencies of the O'Neill Federal Building in January 2004. We regularly distributed our workforce planning guidance and offered our personal support and guidance to agency managers who were charged with developing individual plans.

Further, we facilitated briefings by the US Postal Inspection Service in regards to mail and other delivery service modifications that were going to take place in the weeks up to and including the event.

The GBFEB also facilitated a number of important communications between and among Federal agencies and security planners. Several Federal agencies had been involved in these types of events on different levels in the past and wanted to offer their resources to the US Secret Service and Steering Committee members. This included the US Food and Drug Administration, the VA Medical Center Police Force, EPA and the National Weather Service. We also facilitated meetings between OPM's leadership team and the US Secret Service in both Boston and New York. Once again, this strengthened our mission of as a valuable information resource.

The GBFEB assisted with coordinating several alternatives for Federal employees during the week. For example, at the request of a member agency, we worked with the National Archives and Records Administration's Northeast Region who agreed to offer a two day Records Management Training at their Waltham facility during the DNC week. The class was offered to employees of tenant agencies of the O'Neill Building only. Later in the year, we coordinated participation by local employees in other trainings. Extra seats were made available for computer training modules that were paid for by the USDA Food and Nutrition Service. This provided an additional alternative for employees who were still without plans at the last minute.

At the request of the Board of Directors, GBFEB Chair Fran Zorn issued a memorandum echoing Director James' January 2003 guidance. Board members felt that something with a "local flavor" would better assist them with their planning. The memo once again discouraged widespread use of administrative leave during the planning process. Many agencies were still challenged with employees who were "holding out" for administrative leave to be offered. This memo was distributed numerous times to our 150 Federal agencies and included in the Emergency Forum presentation packets (details to follow.) The memo also requested that agencies share their plans with the GBFEB for informational purposes only. *(See ADDENDUM: May 17, 2004: Chair Frances Zorn Memorandum to Greater Boston Federal Agency Heads)*

In early June 2004, we obtained memorandums from state and local officials encouraging similar strategies for management of their respective workforces. We confirmed that our workforce recommendations were consistent with our state and local counterparts. *(See ADDENDUM: City of Boston and Commonwealth of Massachusetts Memorandums to Employees outlining Work Schedule Options for DNC.)*

Workplace Safety is an evolving role for OPM. They began hosting "Emergency Planning and Preparedness Workshops" in Washington, DC for Federal agencies beginning in September 2003. In this new age of terrorism and homeland security, it has evolved as a necessary function. Executive Director Kim Ainsworth attended the first session held in Washington, DC in September 2003 and brought back useful information for the preliminary planning stages of the DNC. Following that session, she requested that OPM consider hosting a similar session in Boston in preparation for the DNC. In May 2004, OPM selected Boston, and three others, as "pilot cities" to further advance their workforce safety initiative in field locations. The first-ever training forum in a field location took place on May 26, 2004 in Boston. The forum, co-sponsored and coordinated by the GBFEB, and a second in New York later in the month, was designed to address specific needs identified in OPM's *Workplace Security Survey.* The survey, issued to agencies government-wide, including by the Boston, New York and Newark FEBs, assessed agencies' level of preparedness in case of natural or terrorist-related emergencies. The Boston forum also served as a platform for agency representatives to have questions and concerns addressed by senior OPM officials. Marta Brito Perez, OPM Associate Director for Human Capital, served as moderator. Attendees largely represented Agency facilities, COOP and emergency and Human Resources Personnel. *(See ADDENDUM: May 2004 OPM Workplace Security Survey.)*

Following the Forum, Associate Director Perez met with US Secret Service Special Agents Scott Sheafe and Donald Anderson to discuss OPM's role relative to DNC planning. She lauded the GBFEB's efforts and committed to providing additional resources, if necessary, to ensure that the interests of the Federal community at large were accurately represented.

Associate Director Perez returned to Boston on June 17, 2004 for an executive session with the GBFEB Board of Directors. She led a discussion on OPM's role in workforce planning and their goal relative to the Democratic and Republican National Conventions, respectively. Marta also discussed OPM's pilot project and her discussions with other Boards across the country. Boston Board members applauded the GBFEB's ongoing efforts. Our proactive approach over the past year assisted them with not only advanced planning but also addressing union and employee concerns. *(See ADDENDUM: June 17, 2004 Minutes from the Executive Session)*

The GBFEB meeting was followed by an executive briefing with the Commonwealth of Massachusetts Secretary of Public Safety Ed Flynn and other state public safety officials. The meeting's goal was to better formalize communication and working relationships from a workforce perspective and was successful.

OPM issued a second and more strongly worded memorandum in June 2004 to headquarters installations encouraging them to work with their offices in Boston

and New York to make advanced plans in preparation for the political conventions. The memo outlined the specific desired outcomes: to aid in drastically reducing the number of commuters into the City during the convention and again outlined available management flexibilities. The GBFEB distributed this memo to our more than 150 local Federal agencies. *(See ADDENDUM: June 18, 2004: Director James Memorandum for Heads of Departments and Agencies)*

Increasingly beginning in June 2004, local media outlets were interested in the plans of not only government agencies but also local businesses. News reports appeared almost daily. Again, the GBFEB aimed to ensure an accurate flow of information. Reporters were stopping Federal employees outside the buildings requesting comments, particularly the O'Neill Building. Others were making "cold" calls to the numerous O'Neill Building tenant agencies. Local political reporters attempted to focus on taxpayer waste. In an effort to pre-empt potential negative reports, the GBFEB, with the assistance of the Social Security Administration, issued a media advisory outlining alternatives for Federal customers for the week. The advisory was distributed to all local media print and television outlets and focused on those agencies that offer the most public services. The closure of the O'Neill building to the public required that agencies like Social Security, the Passport Office and the US Bankruptcy Court, offer alternates. The coordinated advisory made the information easily accessible to media outlets and once again focused on the continued delivery of essential government services. The information appeared in several local newspapers and television reports. It was not the GBFEB's intention to speak on behalf of any one agency but rather to share information cooperatively. *(See ADDENDUM: July 2004 NSSE Media Advisory.)*

On June 24, 2004, the GBFEB sponsored a "Traffic and Transportation Briefing" for Federal managers in partnership with the Boston Police. More than 75 employees attended to receive the details of traffic reroutes, road closures and transportation modifications. Additionally, the GBFEB distributed the various memos prepared by the City during a public awareness campaign. Many local Federal agencies found this useful and distributed widely among their local staff. We received positive feedback directly from agencies like the Air Marshal Service, Military Entry Processing and others who require significant travel and found the information extremely timely and useful. *(See ADDENDUM: July 22 Boston 2004 Traffic Memo)*

As the NSSE drew closer, the GBFEB worked with the DHS / Federal Protective Service (FPS) to promote workplace safety among the Federal workforce. Many Federal agencies expressed concern that most of the security measures to date had focused solely on the O'Neill Federal Building and raised questions about the safety of the other Federal sites across the City. Our goal was to help the Federal workforce understand the additional security measures that would be in place for the DNC. FPS' role was, indeed, well above and beyond the O'Neill Building. In

mid-July, DHS / FPS Regional Director Ron Libby developed, at the request of the GBFEB, "Frequently Asked Questions" for workplace safety during the DNC. It provided emergency contact information and guidelines on how to reach FPS and such things as reporting suspicious activity. Pursuant to the Homeland Security Act of 2003, DHS / FPS is charged with safety and security of Federal employees in *all* sites. This was distributed widely among our 150 Federal agencies. *(See ADDENDUM: July 14: Workplace Safety during the Democratic National Convention.)*

Our workforce planning role became even more significant in the weeks immediately preceding the event. Locally, the media hype increased as did the anticipation and anxiety levels of many, including Federal agencies and employees. The City of Boston's Host Committee continued with an aggressive public awareness campaign. We did our best to fact-check media reports and raise awareness among the Federal workforce. We distributed the most up-to-date information from local public safety and law enforcement officials, the Host Committee and the City of Boston. This included information about the toll free number and web site for citizens to contact the Mayor's office with questions or concerns.

US Secret Service Special Agent in Charge Steve Ricciardi briefed the Board of Directors at the July 2004 meeting about his role as the DNC's "Principal Federal Official (PFO.)" Governor Ridge identified Mr. Ricciardi as the PFO in accordance with the Initial National Response Plan in a memo dated March 26, 2004. As stated in the Initial National Response Plan, the PFO serves as DHS' representative locally and coordinates Federal activities relevant to or in anticipation of an incident. We felt that it was important to make the Federal population aware of the role of the PFO and its significance for domestic incident management purposes. The GBFEB distributed informational packets about the PFO role to the Federal community at large. And, following a visit and press event locally with Governor Ridge in early July, we promoted among the Federal workforce the significant role of Federal agencies, in cooperation with state and local partners, in the planning and execution of this national event. Again, we felt it was important to raise the awareness of our workforce about the significance of not only the event but the Federal government's role in executing it.

In the weeks prior to the event, the GBFEB reviewed its own emergency preparedness and mechanism for communicating with agencies both during and after hours. The US General Services Administration purchased and offered the GBFEB the use of an electronic software-based communications system called "e-dial." This system allows for simultaneous communication via a pre-recorded telephone message to pre-identified telephone numbers. In the weeks prior to the event, the GBFEB staff checked and collected personal contact information for the full membership and alternates. We were careful to point out that this information

would be held confidentially and used only in the event of a true emergency. We also ensured that agencies understood our goal of maintaining an executive-level discussion. For example, for our purposes, it would not be appropriate to delegate this task to facilities or COOP planners but rather agencies should focus on executives with decision-making authority relative to their respective workforce. As always, our goal would be to ensure that agency executives received accurate, up to date and consistent information to make informed decisions. This was initially labor intensive and required aggressive follow up. However, we eventually received responses from every agency. We also tested the system, in cooperation with GSA and the First US Coast Guard District, the week before the DNC. Once again, partnership was the first-of-its kind and had the potential for a national impact. *(See APPENDIX: Lessons Learned from E-Dial test.)*

At the same time, DHS / FPS Regional Director Ron Libby, who serves as the Chair of the GBFEB Homeland Security Committee as well as our Liaison to the Law Enforcement Community, launched a secure web portal for use by GBFEB members. This portal, developed and supported by DHS / FPS, invited GBFEB members and their alternates only to join. It provides a mechanism in which to communicate electronically and provide "real time" information relative to emergency situations during and after hours. It also provides participants with the opportunity to "chat" live with one another. Once again, the goal was to encourage and maintain an executive-level discussion. The system was tested and proved to compliment other communication mechanisms effectively. *(See APPENDIX: Introduction of Web Portal.)*

Further, following the May Emergency Forum, the GBFEB leadership had ongoing discussions with OPM's leadership about our overall communications policy. Unlike the OPM / GSA / FEMA cooperative decision and communications plan for the National Capitol Region, the GBFEB's traditional role during emergency situations was to make "recommendations" to local Federal agencies relative to the status of the workforce based on a collective decision of GBFEB leaders and local experts. However, for the purposes of the DNC, OPM felt that decision-making "authority" was necessary on the local level. In a July 22, 2004 Memorandum for Heads of Department and Agencies and in a second for Greater Boston Agency Heads, OPM Director Kay Coles James named DHS / FPS Regional Director Ron Libby as the designated official. In that capacity, Mr. Libby was empowered to make determinations as to the status of Government operations in specific locations or offices. These decisions were to be communicated via the GBFEB communications system and through the local media. This was a significant responsibility and one that would surely set precedent nationally. This was the first time that OPM had empowered a local FEB with this authority. *(See ADDENDUM: July 22, 2004 Director James Memorandum for Departments and Agencies.)*

With the assistance and technical support of the FAA New England, the GBFEB was able to re-launch its web site in July 2004. The site had been defunct for a number of months. Our plan was to post relevant information about the DNC before, during and after the event and encourage our agencies to frequently view. This provided another useful communication tool to compliment our efforts. View www.boston.feb.gov.

OPM Director James and OPM's senior leadership planned to keep a careful eye on Boston during the week. In July 2004, OPM Director James coordinated an on site presence during the DNC week. Two law enforcement Special Agents represented Director James in the O'Neill Building and were responsible for analyzing intelligence relevant to the Federal workforce. This was done in cooperation with DHS / FPS Regional Director Libby and his staff. OPM also sent a Public Information Specialist to represent the Federal community at the Joint Information Center housed at the Boston Police Headquarters. Executive Director Kim Ainsworth assisted them with making appropriate contacts and monitored media reports and other relevant information during the week. The GBFEB would be available in the event of any type of response on an as needed basis to coordinate and communicate among local Federal agencies on decisions pertaining to the Federal workforce.

CONCLUSION: Overall, the GBFEB demonstrated true leadership in this new realm. Our efforts were appreciated by the local Federal leadership and proved to be helpful in many different ways. Among our most significant roles was the ensuring the accurate flow of up-to-date information and communication. While we believe that it was a necessary and worthwhile effort, we also believe that it was precedent-setting and will assist FEBs nationwide with addressing similar workforce planning issues in the future.

From our view, the overall security and planning for the DNC was a great success. The US Secret Service and the Boston Police did a fine job and worked in true partnership and cooperative fashion. The event itself went off without any major incidents and public safety was in tact throughout the week. It appeared as though the general public, and Federal employees, were well prepared, well informed and followed the guidance contributing to its success.

In the weeks following the DNC, the GBFEB, and members of our leadership, has offered our lessons learned to the NYFEB and other key officials in preparation for the Republican National Convention (RNC.) We feel that a similar role would be useful and similar guidance is warranted. Additionally, several of our Boston officials are actively and largely involved in the security, planning and implementation of the RNC.

Executive Director Kim Ainsworth will serve as a panel speaker at OPM's September 2004 Superconference to outline this new and evolving role to Federal leaders across the country.

Once again, the GBFEB feels as though this role is of great significance and will likely have an impact nationally in the coming years.

National Aeronautics and
Space Administration

Hold for Release Until
Presented by Witness

September 28, 2007

Statement of
Michael W. Goin
Executive Director
Cleveland Federal Executive Board

Before the

Subcommittee on Oversight of Government Management, the Federal Workforce and the District of Columbia
Committee on Homeland Security and Governmental Affairs
United States Senate

Good morning Chairman Akaka and Members of the Subcommittee. Thank you for the opportunity to appear before you today to discuss the role of Federal Executive Boards in Pandemic Preparedness. My name is Michael Goin. I am an employee of the National Aeronautics and Space Administration (NASA), Glenn Research Center currently serving as executive director of the Cleveland Federal Executive Board, a position I have held since February 2004.

In my role as executive director, I see my responsibility as that of ensuring the organization and delivery of projects and programs that support two distinct lines of business: Human Capital Readiness and Emergency Preparedness, Employee Safety and Security; while promoting communications, cooperation, and collaboration across agency lines, thus creating high-quality Government services and information for our community.

Federal Executive Boards have contributed to the emergency response capabilities of the federal community. As stated in the testimony of my colleagues from Minnesota and Boston, we will provide clear examples of our Federal Executive Board's impact in the area of emergency preparedness. This morning, I will focus my comments on what the Cleveland FEB and its member agencies have done in the areas of emergency preparedness. I will provide specific examples of activities led by our Federal Executive Board, to include how we serve in a unique and vital coordinating role for our local federal community and nation. Additionally, I would like to share a perspective from our local federal agencies on what they believe is needed and how Federal Executive Boards can further assist in pandemic planning.

BACKGROUND

As stated in the Government Accountability Office report (07-515), over 40,000 civilian service employees are covered by Federal Executive Boards in Ohio (Cleveland and Cincinnati).
The Cleveland Federal Executive Board currently serves over 94 federal agencies covering more than 17 counties in Ohio (*see attached geographical boundaries map*).

Also, I should point out that many of our federal agencies in the Cleveland area operate throughout the northern half of Ohio, increasing our area of impact well beyond our stated geographical boundaries.

The mission of the Cleveland Federal Executive Board is to promote unity of purpose among Federal agencies to better serve our community and employees. The activities, projects and programs of the Cleveland Federal Executive Board are coordinated utilizing specific committees, working in partnership with federal, state, and local partners. The Cleveland Federal Executive Board committees' focus includes special areas of interest, such as community relations, training and development, leadership, and security. The security committee, led by the Cleveland Field Office of the FBI, is divided into 4 distinct subcommittees, Emergency Preparedness led by the United States Coast Guard, Ninth District, Information Technology led by NASA- Glenn Research Center, Intelligence led by the FBI, and Physical Security led by Federal Protective Services.

As I am sure you are aware, Federal Executive Boards are not equipped to serve in a first responder role, however we believe we enhance the federal response capability by sponsoring interagency training and conducting exercises that directly impact the readiness of those responders and employees. It is my belief that our Federal Executive Board has served a critical role in the Cleveland area, disseminating key emergency information, ensuring interagency collaboration, and providing timely notifications that assist agency leadership in their decision making process.

Like many of the other Federal Executive Boards, prior to September 11, 2001, much of our preparedness efforts were focused on weather related issues. Following 9-11, our focus has shifted, at the request of our member agencies, to develop an all-hazards plan and an emergency contingency procedures and guidelines handbook, designed to assist employees prior to, during, and immediately following an emergency or disruptive event, including a pandemic.

CLEVELAND'S EXPERIENCE & ACTIVITIES

The federal agency leaders of our community have stated that they expect to receive accurate, timely, and credible information from their Federal Executive Board. They expect us to serve as the focal point for sponsoring interagency training, sending notifications, identifying best practices, and collaborating with state and local partners. I believe that through the combined efforts of the 28 Federal Executive Boards, we are developing and adopting best practices and setting measurable goals. This has assisted us in establishing credibility as a source for emergency preparedness training, partnerships, and notification. Although much has been accomplished, I believe that more needs to be done to ensure uniformity throughout the Federal Executive Board network.

During the past 4-years, the Cleveland FEB has been very active in coordinating and facilitating emergency preparedness activities, as well as developing partnerships with state and local agencies. In an effort to provide you my best perspective on the role of Federal Executive Boards in a pandemic, I will touch on activities and issues directly related to human capital management (e.g. telework, leave policies, and succession planning).

As it relates to pandemic preparedness, the Cleveland Federal Executive Board sponsored a modified, scenario based, Pandemic Tabletop educational exercise, modeled after the Minnesota Federal Executive Board's Pandemic Tabletop. The Cleveland area's exercise provided city, state, and local agency's emergency managers and stakeholders the opportunity to develop and review their agency's pandemic plans and explore HR concerns associated with a pandemic. One of the major findings identified in the exercise was agency inconsistency related to the development and use of telework programs; many agencies had not recognized the value or impact of telework programs in a pandemic.

In an effort to heighten management and employee awareness of pandemic preparedness and planning, the Cleveland Federal Executive Board partnered with the Defense Finance and Accounting Service Cleveland and the Cuyahoga County Board of Health to conduct a series of pandemic briefings, designed to educate attendees on plans and procedures that will help mitigate the effects of a pandemic outbreak. Additionally, working with FEMA region V, the Cleveland Federal Executive Board served as a resource point to order and distribute emergency pocket cards for all civilian and contract employees (*see attached preparedness pocket card*).

In addition to our pandemic exercises and activities we have continued to update and enhance our 24/7 emergency notification system. Through the efforts of our Dallas-Fort Worth Federal Executive Board and the partnership with the FBI, our member agencies are now part of a national emergency notification system, Law Enforcement Online (LEO) and United States Public and Private Partnership (USP3). For the purpose of emergency notification, the USP3 Web based system is capable of issuing notifications in multiple formats: email, text, and text-to-voice. The system can issue 5,000 email and text messages and 10,000 outbound calls in a matter of minutes. Prior to adopting the USP3 system, we were reliant on an outdated phone tree style call down emergency notification process. In response to the recent flooding that many Ohio counties experienced, we have also devcloped a process where weather warnings from the National Weather Service will be issued utilizing the USP3 notification capability.

In addition to the emergency notification capability of the USP3 system, the system also provides members with a daily global snapshot of world events. Many of the daily notifications include relevant information related to H5N1 and pandemic concerns (*see page 8 for report sample*).

Some additional examples of emergency preparedness exercises sponsored by the Cleveland Federal Executive Boards include:

National Response Plan Table Top Exercise

In an effort to encourage reflection and discussions by Agency management regarding crisis response plans, policies, capabilities, jurisdictional roles, interagency collaboration, and cooperation; the Cleveland Federal Executive Board sponsored an interagency National Response Plan tabletop training exercise. The facilitators for the tabletop were professional training instructors and FBI specialists from the FBI academy in Quantico, Virginia.

Prior to the exercise, each participating agency was forwarded a copy of the NRP and encouraged to review their agency's role in the plan. The review was especially helpful in stimulating thought, discussion; for some agencies it was their first exposure to the NRP.

Cleveland Security Briefing and Table Top Exercise

In 2006, the Cleveland Federal Executive Board conducted a Cleveland Security Briefing and Emergency Preparedness Tabletop Exercise. The tabletop exercise was designed to increase agency's understanding of their roles and responsibilities, review notifications and response actions, identify shortfalls and planning gaps associated with their emergency plans. Members of the U.S. Coast Guard, Ninth District and the Cleveland Division of Police facilitated a forum presenting a series of scenarios depicting real life emergencies. The scenarios tested key emergency decision points and interagency issues related to the notification and management of the federal workforce. The tabletop exercise also served as a preparatory exercise for agencies scheduled to participate in the Cleveland Area Security Initiative Exercise sponsored by the Department of Homeland Security.

Cleveland Urban Area Security Initiative Exercise

In 2006, sponsored by the Department of Homeland Security and led by the U.S. Coast Guard Ninth District, Cleveland area agencies participated in a full-scale urban emergency exercise. The exercise included State, County, city, and local personnel, as well as Cleveland Federal Executive Board member agencies, as well as emergency support agencies. Goals for the exercise included testing communications, evaluating training, and the identification of areas needing improvement. The exercise also provided the opportunity to test the interoperability of communications systems, Incident Command System, and identification of training needs. At the conclusion of the exercise, a representative from the Cleveland Division of Police provided the Cleveland Federal Executive Board's Policy Committee with an after action report to ensure agencies could fully benefit from the lessons learned from the exercise.

CHALLENGES

As stated in the GAO report, there are inconsistencies across the FEB network in regards to different staffing levels, different funding models, different resources, and different reporting structures. However, each Federal Executive Board faces the same degree of complexity in carrying out their duties and responsibilities.

In preparation for this hearing, I surveyed our member agencies to better report their challenges associated with pandemic planning and readiness. Many of the agencies identified issues related to telework programs and their agency's inability to handle a surge during a pandemic. They are seeking assistance from the FEB to help clarify telework, leave policies, and hiring flexibility guidelines. Much of that will be accomplished with the help of the OPM. Many agencies point to the need for periodic security and emergency preparedness training, credible information of new developments, and timely updates from reliable sources. I believe our close working relationship with FEMA will help us meet the training needs, however, resource limitations may adversely impact our ability to deliver all that is needed and expected.

If FEBs are to be effective in these areas, our positions will need to be properly designated as to having a role as emergency personnel. I believe this will alleviate any clearance issues that may develop as our roles expand. It is also my hope that the final version of the National Response Framework will appropriately identify FEBs as having a role in emergency planning and support.

This week our office sponsored retirement seminars for CSRS and FERS covered employees. Within a survey of the 230 attendees, 63% of them stated they intend to retire with in 5 years, validating predictions that the waves of retirements are imminent. Given those projections, we are faced with yet another challenge: how do we maintain our capabilities with the pending loss of some of our most knowledgeable and relied upon personnel; many of those will be our emergency responders.

What resources will be available to support the FEB strategic plan that's being developed with the guidance of OPM? As we focus more of our attention on emergency preparedness issues and activities, we must be mindful of its impact in the areas of human capital management and community outreach, clearly both affect our overall success. Many of our human capital management programs ensure our emergency preparedness initiatives are effective by ensuring individuals are trained and employees are aware.

For example, the Cleveland Federal Executive Boards sponsors a nine-month leadership development program (Cleveland Federal Community Leadership Institute) to ensure our federal community has a pool of qualified candidates to assume leadership roles in the future. Much of the training is focused on teamwork, community awareness, and individual accountability. As the wave of retirements loom, and succession models are developed, we must be more proactive and less reactive in preparing our future leaders.

CLOSING

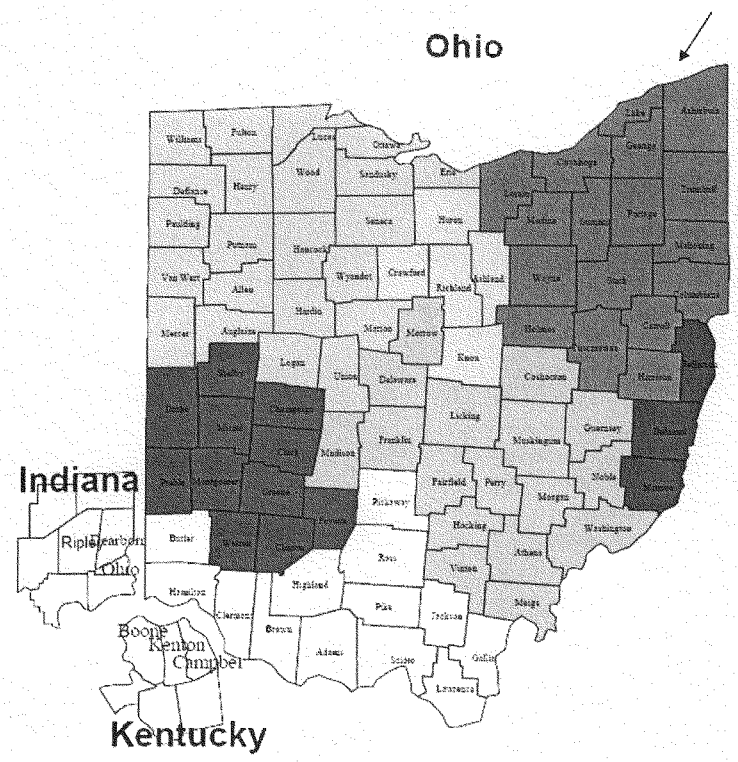
In closing, I would like to say that I believe Federal Executive Boards do have a significant role to play, not just in pandemic planning, but in the overall efficiency of our government in the field. Let me also say that many of the examples I provided today, could not have been possible without the support of our sponsor agency, NASA Glenn Research Center. Their dedication and unwavering support of the Cleveland FEB, has been paramount in our ability to deliver on our goals.

Our federal leaders have stated that they are committed to the work of the FEB, its mission, and its goals. As one agency leader recently commented, "The FEB is the only venue for agencies to interact with each other, thereby offering a means of communication that would otherwise not exist."

Thank you, Mr. Chairman and members of the Subcommittee. It has been my honor to appear before you today. I hope that the information contained in this statement provides insights into what role Federal Executive Boards have in a pandemic preparedness and in enhancing our government's emergency response capability. At this time, I would be happy to answer any questions you or the other members of the subcommittee may have regarding my statement.

Geographical Boundaries for the Cleveland Federal Executive Board (CFEB)

CFEB Coverage Area (as of 10/2006)



Counties covered by the CFEB include:
Ashtabula, Carroll, Columbia, Cuyahoga, Geauga, Harrison, Holmes, Lake, Lorain, Mahoning, Medina (except the city of Wadsworth and Westfield Center), Portage, Stark, Summit, Trumbull, Tuscarawas, and Wayne Counties.

** In 2007, the Cleveland Federal Executive Board expanded is Combined Federal Campaign geographical coverage area to 18 Ohio counties and 2 counties in Pennsylvania (Erie and Crawford).*

Emergency Preparedness Pocket Card

GSA citizen corps FEMA GSA Smarter Solutions

Be Prepared for Emergencies!

Get a Kit.

Make a Plan.

Be Informed.

Prepare Your Important Documents

In the event of an emergency, having copies of important documents and other valuable information in a safe place can be vital for your well-being. The checklist on the reverse side can be completed according to your personal situation and kept with copies of the documents as a cover sheet.

After you compiled your documents, be sure to keep them in a secure place, such as a bank safe-deposit box where they are less likely to be damaged or lost.

(See reverse side.)

S-07-0465

Emergency Preparedness Important Documents Checklist

PERSONAL PAPERS

- ☐ Social Security Numbers; important mailing and e-mail addresses; and phone numbers
- ☐ Birth certificates; adoption papers
- ☐ Marriage certificate
- ☐ Citizenship papers; naturalization documentation
- ☐ Drivers licenses; passports; federal and state IDs
- ☐ Shot records; blood types
- ☐ Court orders relating to divorce, child support and custody, alimony or property division

FINANCIAL INFORMATION

- ☐ Wills (last will and testament, living will)
- ☐ Powers of attorney documentation (for financial and health matters)
- ☐ Insurance policies, including policy numbers and coverage limits, addresses and phone numbers of agents or companies
- ☐ Bank accounts with types of accounts and account numbers, and telephone numbers associated with the accounts
- ☐ Credit card account numbers and telephone numbers associated with each account
- ☐ Real estate documents (leases, deeds, mortgages, and promissory notes; closing papers)
- ☐ Vehicle title(s)
- ☐ All bonds, stocks and certificates; sales or installment contracts and finance agreements
- ☐ Additional documents

To learn more, visit www.ready.gov.

RESOURCES

I. ARTICLES

The Cleveland Federal Executive Board Emergency Dismissal Plan
http://www.grc.nasa.gov/WWW/OHR/FEB/eplan.pdf

The Cleveland Federal Executive Board Employee Emergency Contingency Handbook
http://www.grc.nasa.gov/WWW/OHR/FEB/emerghb.pdf

The Cleveland Federal Executive Board's Constitution and Bylaws
http://www.grc.nasa.gov/WWW/OHR/FEB/bylaws.pdf

The Cleveland Federal Executive Board- 2007 Combined Federal Campaign Coverage Area
http://www.uws.org/cfc/neocfccounties.pdf

Code of Federal Regulations:
5CFR960 Federal Executive Boards
http://www.access.gpo.gov/nara/cfr/waisidx_07/5cfr960_07.html

II. REPORTS

Cleveland Federal Executive Board- 2006 Annual Report
http://www.grc.nasa.gov/WWW/OHR/FEB/ar2006.pdf

Cleveland Federal Executive Board- 2005 Annual Report
http://www.grc.nasa.gov/WWW/OHR/FEB/ar2005.pdf

Government Accountability Office Report (GAO-07-515)
The Federal Workforce: Additional Steps Needed to Take Advantage of Federal Executive Boards' Ability to Contribute to Emergency Operations, May 4, 2007
http://www.gao.gov/new.items/d07515.pdf

USP3- Global Information Snapshot –Sample Report
Indonesia
Disease
A man who contracted bird flu after preparing an infected chicken had died on 09/06/2007, lifting worldwide death toll to 200, Friday, September 07, 2007
http://www.thejakartapost.com/detailgeneral.asp?fileid=20070906182923&irec=2

Testimony
Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia
United States Senate

Preparing the National Capital Region for a Pandemic

Statement of
Kevin Yeskey, M.D.
Deputy Assistant Secretary
Director, Office of Preparedness and Emergency Operations
Office of the Assistant Secretary for Preparedness and Response
U.S. Department of Health and Human Services

For Release on Delivery
Expected at 10:00am
Tuesday, October 2, 2007

Chairman Akaka, Ranking Member Voinovich, and distinguished Members of the Subcommittee, thank you for the opportunity to present the progress HHS has made in national preparedness for pandemic influenza, and specifically the preparedness of the National Capital Region. Over the past two years, with the $5.6 billion supplemental funding we received from Congress, we have worked closely with our International, Federal, state and local partners to advance our preparedness for pandemic influenza. The threat of a pandemic remains a real one, and I appreciate that in holding this hearing, you share our sense of urgency about our preparedness.

As you know, the President released the *National Strategy for Pandemic Influenza* in November 2005, followed by a detailed *Implementation Plan* from the Homeland Security Council (HSC) in May 2006. The HSC Implementation Plan assigned over 300 tasks across the Federal Government to improve our Nation's preparedness for pandemic influenza. HHS has made substantial progress in the nearly 200 action items assigned to our department, completing over 80% in one year. These gains are real and measurable, and they cover a broad range of preparedness, including enhancing our international laboratory networks, developing and releasing guidance on community-based measures to mitigate the effects of a pandemic, and expanding the Medical Reserve Corps program. We also released the HHS Pandemic Plan and HHS Implementation Plan, and those are available alongside additional information and planning resources at www.pandemicflu.gov.

All of these accomplishments are consistent with the mission of ASPR, which Congress created in December 2006 through the Pandemic and All-Hazards Preparedness Act. The ASPR mission is to lead the nation in preventing, preparing for, and responding to the adverse health effects of public health emergencies and disasters, and the vision we see is "A Nation Prepared." Within HHS, ASPR coordinates the preparedness and response enterprise, which focuses on the continuum of preparedness from research and development of medical countermeasures to response delivery platforms that support state and local responders in reaching our citizens during an incident.

Our preparedness for pandemic influenza involves a shared responsibility among our entire Department, our partners in the International community, the Federal interagency, state, local, tribal and territorial governments, the private sector, and, ultimately, individuals and families. In addition, we believe our planning for an influenza pandemic is part of an all-hazards approach. The gains we make in increased preparedness and response capability for pandemic influenza will help us across the spectrum of public health emergencies and disasters.

Enhanced State and Local Preparedness

- By the end of this year, the Department will have awarded $600 million in emergency supplemental funding through the Centers for Disease Control and Prevention (CDC) and ASPR to 62 awardees: 50 states, five U.S. territories, three Freely Associated States of the Pacific, New York City, Los Angeles County, Chicago, and the District of Columbia to upgrade state and local capacity in regard to pandemic influenza preparedness. The funding has occurred in three general phases:
    - *Phase 1- $100 Million*
        - Senior HHS officials, led by Secretary Leavitt, conducted Pandemic Influenza Preparedness Summits in every state to facilitate community-wide planning and to promote shared responsibility for pandemic preparedness.
        - To assess gaps in pandemic preparedness and guide preparedness investments, CDC created an assessment tool for awardees to use in evaluating their own jurisdiction's current state of preparedness. The awardees were required to submit: 1) a gap analysis; 2) a proposed approach to filling the identified gaps; and 3) an associated budget for the critical tasks necessary to address those gaps. High priority areas being addressed include:

- Exercising pandemic incident command systems
- Linking animal and human surveillance systems
- Augmenting laboratory capacity
- Plans for vaccine and antiviral distribution, mortuary affairs, protective masks, and continuity of essential functions

- *Phase 2- $250 Million ($225 Million for four priority activities and $25 Million for competitive demonstration projects)*
  - $225M of the Phase 2 funds were used for four priority activities: 1) work with jurisdictional colleagues in emergency management, community organizations and other agencies to develop a jurisdictional workplan to address gaps identified by the assessment process; 2) develop and exercise an antiviral drug distribution plan; 3) develop a pandemic exercise schedule to include – at a minimum -- medical surge, mass prophylaxis, non-pharmaceutical public health interventions, communications and the antiviral drug distribution exercises; and 4) submit the jurisdictional pandemic influenza operational plan to CDC.
  - Three planning priorities were targeted — state/local exercises of key plans (mass vaccination using seasonal flu clinics, community containment, medical surge); developing antiviral distribution plans; and review of statewide pandemic influenza plans
    - 85% of the awardees used seasonal influenza vaccination clinics to exercise mass prophylaxis plans
      - Highlights - some state medical boards used Emergency Medical Technicians (EMTs) and paramedics to act as vaccinators to reduce the burden on public health staff; some states used drive-through clinics to increase throughput and enforce social distancing.

- 83% of the awardees participated in tabletop exercises of non-pharmaceutical interventions and plans to contain the spread of pandemic influenza
    - Emphasis on school closing decisions and discouragement of large public gatherings; the majority of awardees responded that gaps in their existing plans were identified and that further planning refinements are necessary to produce viable and executable plans. Funding in Phase 3 will help address these gaps.
- Over 50% of the awardees reported conducting exercises of antiviral distribution plans.
- The public health and medical components of this funding supplement have included two of the Target Capabilities identified as part of National Preparedness under Homeland Security Presidential Directive #8: Mass Prophylaxis and Medical Surge.
- 97% of the awardees have submitted pandemic influenza operational plans that involve interaction and partnership with law enforcement and emergency management (antiviral distribution), education, and business sectors (community mitigation and continuity of operations).

▪ $25M of the Phase 2 funds will be used to meet the intent of Congress to award the pandemic influenza emergency supplemental funds based on performance. The funds will be awarded competitively to awardees that successfully propose a plan to develop, implement and evaluate pandemic influenza interventions. Proposals will be solicited for public health interventions for which there are few data, unclear consequences, or inconclusive effectiveness.

- *Phase 3- $250 Million available.*

- CDC has awarded $175M of Phase 3 funding to support awardees' efforts to fill gaps identified in Phases1 and 2. The awardees will be required to utilize the tools developed under the auspices of the Homeland Security Exercise Evaluation Program to create planning, training, and exercise evaluation programs.

- $75 M will be awarded as supplements to the 62 entities that currently receive awards through the Hospital Preparedness Program (HPP) cooperative agreements. Applications are due in October 2007.

  - The HPP transferred from the HHS Health Resources and Services Administration (HRSA) to ASPR in March of this year as directed under the Pandemic and All Hazards Preparedness Act (PAHPA). The Program has continued to focus on enhancing surge capacity.

    - Priorities for Medical Surge that were evaluated as part of the state plan review:

      - States have the ability to report available beds which is a requirement in the 2006 Hospital Preparedness Program Cooperative Agreement
      - Effective use of civilian volunteers as part of the Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) and Medical Reserve Corps (MRC) programs
      - Planning for Alternate Care Sites
      - Development of Health Care Coalitions that promote effective sharing of resources in surge

situations – Will be funding 10 partnership demonstration projects for $18.1M in FY 2007.

- Plans for providing the highest possible standards of care in situations of scarce resources. ASPR partnered with the HHS Agency for Healthcare Research and Quality (AHRQ) in the development of a *Community Planning Guide on Mass Medical Care with Scarce Resources*. The guide includes a pandemic influenza case study.

- The $75M of the Phase 3 funding that has been allocated to the HPP program for upgrading state and local pandemic influenza preparedness capacities.
  - This funding will establish stockpiles of critical medical equipment and supplies, as well as be used to develop plans for maintenance, distribution and sharing of those resources. This funding may also be used to support the planning and development of alternate care sites (ACS) and medical surge exercises for pandemic influenza.
  - Examples of allowable activities include:
    - Stockpiles of ventilators, ancillary supplies and oxygen
    - Personal protective equipment (PPE) and infection control supplies
    - Alternate care sites – staffing, operational plans and exercises
    - Mass fatality plans and equipment and supplies
    - Medical surge exercises

Additional funding from the HHS Hospital Preparedness Program (HPP) and the CDC

Public Health Emergency Preparedness cooperative agreement (PHEP) has been made available to Maryland, Virginia, and the District of Columbia. The amounts for FY 2007 are as follows:

	DC	MD	VA
HPP	$1.73M	$ 7.61M	$ 10.18M
PHEP	$9.13	$ 12.82M	$ 17.11M

In July 2007, ASPR placed a Regional Emergency Coordinator within the Office of the National Capital Region Coordination to enhance the HHS contribution to this very important office. The goals of this staff position include: improved communications between HHS and ONCRC, enhanced planning support to the ONCRC with regards to public health and medical services, and improved coordination of health and medical issues between HHS and ONCRC. The REC includes in his portfolio of activities: linking HHS preparedness grants to other federal agency grant programs; assisting with a medical infrastructure risk assessment; and serving as the federal health and medical representative to the Health Officials Committee on the Metropolitan Washington Council of Governments.

Countermeasure Procurement and Advanced Development

I will not devote much time to describe in detail the HHS countermeasure successes, however there has been tremendous progress in achieving the 5 goals listed below from the HSC Implementation Plan.

Vaccine Goal #1	To establish and maintain a dynamic pre-pandemic influenza vaccine stockpile available for 20 million persons: H5N1 stockpiles (40 million doses)
Vaccine Goal #2	To provide pandemic vaccine to all U.S. citizens within 6 months of a pandemic declaration: pandemic vaccine (600 M doses)
Antivirals Goal #1	To provide influenza antiviral drug stockpiles for treatment of pandemic illness for 25% of U.S. population who we estimate will

	become clinically ill during a pandemic (75 million treatment courses[1])
Antivirals Goal #2	To provide influenza antiviral drug stockpiled for strategic limited containment at the onset of a pandemic (6 million treatment courses)
Diagnostics Goal #1	To develop new high throughput laboratory and Point of Care influenza diagnostics for pandemic virus detection

Federal Preparedness Planning

- For the past six months, ASPR has been a lead partner in the development of a U.S. Government-wide Pandemic Influenza Strategic Plan, which describes what steps Federal Departments will take to respond to the emergence of a novel influenza virus abroad and here in the homeland. This strategic planning process further codifies the HHS public health and medical responsibility to mitigate illness and reduce deaths during a pandemic through the provision of medical countermeasures and materiel, community mitigation guidance, necessary laboratory and surveillance tools, and some of the nation's finest public health and medical emergency response personnel.
- The Department's operational plan for pandemic influenza response details how HHS will fulfill its important responsibilities and how ASPR will coordinate the deployment and utilization of HHS assets and expertise. This plan, or playbook as we call it, will be further refined in the coming months to ensure a seamless integration with the U.S. Government-wide Plan. Further, HHS Operating Divisions including the CDC are developing their own detailed operational plans that are aligned with the Department's plan to enable a cohesive Departmental preparedness approach. A goal for next year is to work with states to develop regional playbooks that will continue to promote integrated planning across tiers of government.

[1] This figure assumes a severe, 1918-like pandemic.

HHS held a number of exercises to test the operational plans I have described. ASPR hosted Department-wide exercises with senior leadership to test how we will leverage the full scope of HHS resources and capabilities in response to pandemic influenza. ASPR has pre-identified six Senior Federal Officials to work in coordination with the DHS pre-designated Pandemic Influenza Principal Federal Officials, and our Senior Federal Officials are engaged in State-sponsored exercises taking place in their regions. The HHS Senior Federal Officials support the DHS Principal Federal Officials in their overall leadership role for the Federal response.

In summary, HHS pandemic influenza preparations continue to move forward. The responsibility for pandemic preparedness is shared at the local, State and federal levels and includes private as well as public partners. HHS has provided funding and guidance to our State partners and we have actively engaged in workshops and exercises with our State and local partners to advance pandemic preparations. In the NCR we have enhanced our partnership with the ONCRC by providing a full-time emergency coordinator to assist with public health and medical preparedness.

Thank you for the opportunity to present the progress HHS has made in national preparedness for pandemic influenza. With your leadership and support, we have made substantial progress. The threat remains real, and we have much left to do to ensure that we meet our mission of a Nation prepared for a potential influenza pandemic.

This concludes my testimony. I will be happy to answer any questions.

Testimony before the Senate Committee on Homeland Security and Governmental Affairs;
Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia

Preparing the National Capital Region for a Pandemic

Statement of Mr. Christopher T. Geldart
Director, Office of National Capital Region Coordination
Federal Emergency Management Agency
Department of Homeland Security

Tuesday, October 2, 2007
Room 342
Dirksen Senate Office Building
Washington, D.C. 20515

FEMA

Introduction

Good morning Chairman Akaka and Ranking Member Voinovich. I would like to thank you for the opportunity to appear before the Committee today to discuss the role of the Office of National Capital Region Coordination (NCRC) within the Department of Homeland Security's (DHS) Federal Emergency Management Agency (FEMA) and how we work with our homeland security partners at all levels of government and within the private and nonprofit sectors to enhance preparedness within the National Capital Region (NCR). Specifically, I will discuss our role in a variety of on-going pandemic influenza initiatives in the region, which is just one component of our expanding efforts to effectively coordinate critical homeland security initiatives in the NCR.

Background

The NCR is the fourth largest metropolitan area in the United States and encompasses the District of Columbia and 11 local jurisdictions across Maryland and Virginia. It is home to more than 5 million residents and 20 million tourists annually, and is the seat of national government with more than 230 Federal departments and agencies.

Under section 882 of the Homeland Security Act of 2002, as amended the NCRC was created to "oversee and coordinate Federal programs for and relationships with State, local and regional authorities" within this unique region. The office originally served as a staff and resource coordination element within the Office of the Secretary in DHS. However, as a result of the Post-Katrina Emergency Management Reform Act of 2006, the NCRC became a component of FEMA and reports directly to the Administrator.

To fulfill its mandate, NCRC coordinates daily with local, State, regional, Federal, private sector, and nonprofit entities, to include the Joint Federal Committee, Metropolitan Washington Council of Governments, the regional Emergency Preparedness Council and the NCR Senior Policy Group – as well as with FEMA Region III, headquartered in Philadelphia. Stakeholders include homeland security advisors, emergency management directors, chief administrative officers, public health officials, first responder leadership, and many others.

Meeting the Pandemic Influenza Challenge

"The Implementation Plan for the National Strategy for Pandemic Influenza" defines DHS' role as being responsible for the coordination of the overall Federal response during an influenza pandemic. FEMA's role during a pandemic influenza outbreak is to coordinate the identification, mobilization, and deployment of Federal resources to support the life-saving and life-sustaining needs of the States and their populations.

While the NCRC does not lead efforts to create pandemic influenza contingency plans, we coordinate and synchronize Federal interagency planning efforts with NCR jurisdictions. Our coordination efforts ensure complimentary multi-jurisdictional planning for preparedness, response, and recovery actions in the region.

"The NCR Homeland Security Strategic Plan," which serves as a roadmap for strengthening regional capabilities for a safer and more secure NCR, identifies public health preparedness as one of its primary priorities. Under this strategic framework, the region is engaged in pandemic influenza preparedness actions including integrating plans related to health surveillance, detection, and mitigation between NCR partners.

NCRC Priorities and Pandemic Influenza Preparedness

As the NCRC Director, my goal is to build upon the strong coordination and partnership mechanisms created in the NCR to move our mission forward as a part of FEMA. My priorities reflect emerging regional needs and national policy guidance, with a particular focus on Catastrophic Planning, enhanced Federal Coordination in the NCR, and Regional Risk Assessment.

Catastrophic Planning

NCRC actively advances region-wide catastrophic planning efforts. This office was instrumental in initiating a regional evacuation and planning effort through support and participation on the DC-led NCR Evacuation and Sheltering Plan Working Group, among other efforts. As the New FEMA vision moves forward, we have an opportunity to take a substantial leap in NCR catastrophic planning. By coordinating current State and local

planning efforts with Federal grant funding provided in the recent supplemental appropriation, and the on-going catastrophic planning efforts underway at FEMA, we can bring resources and expertise to bear in a way that was not possible before.

Similarly, NCRC works in close coordination with the Department of Health and Human Services (HHS), as well as the DHS Office of Health Affairs, the DHS Secretary's pre-designated National Principal Federal Official (PFO) for pandemic influenza, Vice Admiral Vivien Crea, and the regional pre-designated PFOs. As the framework of this Federal partnership matures, we will continue to assist in their efforts to work with Federal, State, regional, and local entities to plan for a pandemic influenza outbreak in the NCR and elsewhere throughout the nation. The pending hire of a Public Health Service Officer specifically to focus on pandemic influenza planning will enhance NCRC's efforts in this regard.

Within the NCR, we will continue to facilitate pandemic influenza planning efforts by bringing together Federal agencies and their State and local counterparts, as we did recently with the Federal Reserve Board and the State of Maryland, Commonwealth of Virginia, and the District of Columbia in a meeting that highlighted key areas of commonality and those that need specific additional planning and action.

Additionally, NCRC will continue integrating pandemic influenza-related matters into major program areas, working with our regional partners. The NCR First Responder Partnership Initiative (FRPI), a landmark credentialing effort, has incorporated Public Health and Medical Services (ESF #8) and pandemic influenza response operations into various demonstrations over the past 2 years. NCRC continues to work with HHS on the credentialing of health care professionals as required by "Implementing the Recommendations of the 9/11 Committee Act of 2007."

Additionally, NCRC and our NCR partners have coordinated or participated in exercises specifically focused on pandemic influenza, including:

- Department of the Treasury Functional Exercise

- Military District of Washington Pandemic Flu Tabletop Exercise
- Nonprofit Roundtable of Greater Washington: Nonprofit Sector Tabletop
- Regional Emergency Preparedness Council Senior Leaders Tabletop Exercise
- "Determined Accord" Tabletop Exercise

Enhanced Federal Coordination

The NCRC's efforts to significantly strengthen our coordination mechanisms with our Federal partners are also contributing to the region's pandemic influenza initiatives. For example, we are coordinating FEMA's National Continuity Programs (NCP), responsible for the enduring continuity of the national government. NCP has disseminated "Continuity of Operations (COOP) Pandemic Influenza Guidance" to more than 70 Federal Departments and Agencies in the NCR. As mentioned, NCP also conducted the COOP tabletop exercise "Determined Accord," which focused on pandemic planning requirements and capabilities and was conducted in seven sessions within the NCR.

Recognizing that a pandemic influenza outbreak would not be contained within NCR's borders, we are continuing to integrate the activities of FEMA Region III to jointly advance NCR regional planning efforts. This includes linking key Federal entities into the planning process with Region III State and local entities.

Other Federal coordination has included the General Services Administration in regard to the use of Federal virtual workplaces in the event of a pandemic, and the U.S. Post Office regarding its potential role in distributing prophylaxes. These are just a few examples.

Operationally, the NCR in its standing Federal coordinating role ensures coordination of Federal protective measures and protocols in advance of and immediately upon any event, including pandemic influenza. The NCRC can now leverage FEMA's forward leaning capabilities to aid in immediate response to include development of a regional common operational picture for the Federal Government, States, and jurisdictions within the region. To accomplish this, the NCRC will leverage existing entities and protocols to facilitate and enable a seamless transition from steady-state operations through incident

management support with the desired end-state of continuous information sharing and incident response among and between our Federal, State, and local partners.

Regional Risk Assessment

The region is committed to building on regional risk assessments that will enable informed resource allocation and subsequently lead to more strategic capability development. We are engaged with the DHS Office of Risk Management and Analysis to assist the region in developing a way forward on a comprehensive and actionable regional risk assessment for the NCR that builds on the data collection efforts of the NCR Hazard Identification and Risk Assessment project. Pandemic influenza preparedness is part of this process, which will lead to a better understanding of the NCR's current readiness and recommendations for managing areas of risk implicated by pandemic influenza.

Conclusion

The NCRC is now at an exciting crossroad as it continues its central preparedness and coordination missions as part of FEMA, and furthers its collaboration efforts with the jurisdictions that comprise the NCR. Building upon the foundation that has already been constructed, NCRC will continue to take proactive steps with our homeland security partners to protect, prepare for, respond to, and recover from the public health threat posed by pandemic influenza.

I would like to thank Chairman Akaka and Ranking Member Voinovich and the Members of the Committee for the opportunity to discuss the role of the FEMA Office of National Capital Region Coordination. I am happy to answer any questions you may have.

Robert Mauskapf

Director of Emergency Operations, Logistics and Planning in the Emergency Preparedness and Response Program of the Virginia Department of Health (VDH)

Testimony

Before the

United States Senate Homeland Security & Government Affairs Subcommittee on Oversight of Government Management, the Federal Workforce and the District of Columbia

Hearing on

"Preparing the National Capital Region for a Pandemic"

October 2, 2007

Pandemic Flu Preparedness in Virginia and the National Capital Region

Good morning/afternoon. I am Robert Mauskapf, Director of Emergency Operations, Logistics and Planning in the Emergency Preparedness and Response Program of the Virginia Department of Health (VDH). I will be presenting the planning activities in Virginia for a possible pandemic of influenza, as well as discussing collaboration in the National Capital Region. The three points I want to be sure to emphasize are that: 1) Virginia has undertaken extensive planning efforts for a possible pandemic of influenza or other infectious disease, though much remains to be done; 2) the three jurisdictions in the National Capital Region work closely together on all aspects of emergency planning and response including pandemic influenza, through emergency response for each jurisdiction remains the responsibility of each Governor or the Mayor; and, 3) there needs to be closer collaboration and communication on NRC emergency planning between these three jurisdictions, federal agencies and the federal government since a high percentage of federal workers live in one of the three areas.

The Virginia Department of Health is a unified public health system, including 35 health districts that cover the entire state, as well as 5 planning regions that coordinate planning activities among the health districts in each region. The Northern Region has 5 health districts which comprise the Virginia component of public health in the National Capital Region. These 5 health districts – Alexandria, Arlington, Fairfax, Loudoun and Prince William – as well as the VDH Northern Region team, have been actively involved in all public health and healthcare planning efforts in the National Capital Region.

The Commonwealth of Virginia's planning for a possible pandemic of influenza dates back to 2002 with the development of the Virginia Department of Health's first Pandemic Influenza Response Plan. Virginia expanded this initiative in March, 2006 with a Statewide Summit co-hosted by the Secretary of Health and Human Services Michael Leavitt and Governor Timothy Kaine. This event brought together over one thousand public and private sector stakeholders from local, state, federal and volunteer organizations who identified many flu related issues during functional specific breakout sessions. Virginia formed a Pandemic Influenza Advisory Group in 2005 which has convened quarterly since that time. The Group consists of multi-discipline professionals and subject matter experts (public and private sector, governmental and non-governmental, health and non-health) who are engaged in the development, implementation and testing of the State Pandemic Influenza Plan designed to address the roles of all state agencies for Pandemic Influenza mitigation, preparedness, response and recovery.

In late 2005, VDH produced PANDEMIC FLU: *A Video Guide to Pandemic Flu Preparedness in Virginia*, introduced by Governor Kaine and a valuable resource to all Virginians. The production has English and Spanish versions and is available as DVD and VCR as well as streaming format on VDH's Pandemic Flu Web site, www.vdh.virginia.gov/pandemicflu. Over 12,000 copies have been widely distributed. This 15 minute video has aired on local cable TV access channels and been shown at formal and informal meetings of educators, faith leaders, community organizations and healthcare facilities statewide. It offers a brief overview of the major issues surrounding pandemic flu and can be used as a stand-alone tool or in conjunction with other pandemic

flu materials. VDH is in the process of updating the production in at least three additional target languages.

Weekly activity reports were provided to the Governor for the last 9 months of 2006 and were transitioned to monthly reports in January 2007. Reporting provides the Governor anecdotal descriptions of local, regional and state level preparations. The report enjoys a statewide distribution, with all reports available on the VDH web site. The September 2007 report is attached for your information. The VDH web site also provides timely and comprehensive information regarding all aspects of Virginia's government, business and individual Virginian's response to a flu pandemic, as well as presentations and other educational materials. VDH also monitors regional, national and international information related to Avian and Pandemic Influenza events and preparedness strategies available through numerous sources including the CDC and WHO, among others, and incorporates best practices into our planning efforts, where appropriate.

Emergency Preparedness in the National Capitol Region (NCR)

As with all Emergency Preparedness and Response Planning, Pandemic Influenza Plans are coordinated across the NCR at state and local levels as well as with our Department of Homeland Security Regional Coordinator and other Federal partners. School Systems, Private Sector / critical infrastructure partners also are active planning collaborators. Efforts are facilitated and supported by the Metropolitan Washington Council of Governments. Disease Surveillance, Regional Strategic National Stockpile Management, Medical Surge, Public Information and Fatality Management are among the focus areas addressed and coordinated. All planning is a collaborative effort involving Chief Administrative Officers, Emergency Management, Law Enforcement and Responder Communities, Public Health and Healthcare providers, and others. The NCR has a robust, coordinated exercise program which routinely tests plans, systems and other interoperability issues.

One important gap in our planning is in coordination with key federal agencies and, indeed, the entire Federal Government. NCR jurisdictions must be integrated into Federal Continuity of Operations / Continuity of Government (COOP / COG) planning. A thorough analysis of Federal support expectations of the NCR jurisdictions is an absolute requirement. Remember - Federal employees live in our neighborhoods and are dependent on our services; if there are any preferential expectations to assist in Continuity of Federal Operations, they have not been shared with us, their service providers.

Virginia's Emergency Response

The Commonwealth of Virginia Emergency Operations Plan describes how the Governor leads response efforts through the NIMS compliant Virginia Emergency Operations Center (VEOC). As mandated by a Governor's Executive Order, certain state agencies are directed to provide members for the Virginia Emergency Response Team who will manage their agencies' representation at the VEOC in times of emergencies. (Example: VDH is assigned as lead agency for the Health and Medical Emergency Support Function (ESF-8.)) Certain state agencies maintain an in-house reach back coordination center so that agency heads manage their resources statewide. Most state

agencies maintain intra state regional presence. However the VEOC coordinates jurisdictional emergency response directly with county / city level Emergency Operations Centers. VDH coordinates hospital response through Regional Hospital Coordination Centers (RHCCs, all Level 1 Trauma Centers) in the state's six (6) hospital regions. RHCCs serve as communications links to hospitals in their regions in times of emergency.

Continuity of Operations (COOP)

Governor Kaine issued an executive order directing state agencies to create or update Continuity of Operation Plans to conform to a template produced by the Virginia Department of Emergency Management. State agencies have updated COOPs with Pandemic Flu related / specific elements. Addressed issues include:

Workforce Reduction

- Absenteeism Policy
- Telecommuting Policy
- Development of an adjunct emergency workforce
- Communicating with employees via an "employees only" section on the public website

Staffing Support/Coordination

- Compensation Policy
- Data Privacy Policies
- Management Expectations and potential alternative duties.
- Limiting points of entry into VDH buildings and providing regular health screening

Identification of key positions, skills, and personnel
Back-Up personnel
Delegation of authority
Leadership Succession
System Redundancies
Alternate Worksites
Primary and secondary individuals for core functional roles for Incident Command
Prioritization of Agency Functions
Augmentation Support Personnel: Twenty-six Medical Reserve Corps (MRC Volunteer Management System (VMS) Currently over 7,200 MRC volunteers including over 5,400 with medical skills are identified and available for response.
Pre-positioned Equipment Caches
Anti-Viral Caches: State and regional caches of 5-day anti-viral treatment courses are in place in quantity to provide treatment courses to over 37,000 hospital staff, approximately 30% of the Commonwealth's hospital workers. This is in addition to the state purchased cache of anti-viral medication to treat members of the public who develop influenza.

Communication and Coordination Efforts

Virginia's Community Outreach partners include (but are not limited to) the Virginia Municipal League, Virginia Association of Counties, Emergency Managers, Local / Regional Summits, schools, colleges and universities, healthcare entities, private

sector partners including businesses and other local contacts. Communications efforts focus on pre-scripted Public Service / Public Health Announcements, keeping media engaged, developing public education opportunities and materials, developing Message Maps and establishing a Public Inquiry Center.

VDH Communications has developed a series of print communications tools to support the work of health districts to reach Virginians with important pandemic and seasonal flu messages. The content is based on recommendations from the Centers for Disease Control and Prevention and the U.S. Department of Health and Human Services. Pandemic flu print materials include:

- English and Spanish language brochure on washing hands and sneeze and cough etiquette
- English and Spanish language brochure on pandemic flu, seasonal flu and personal hygiene
- English and Spanish language stickers for elementary school-aged children on personal hygiene
- Adult English and Spanish language bookmarks on preventing colds and flu
- Teen English and Spanish language bookmarks on preventing colds and flu.

VDH also developed technical assistance tool kits to support public outreach and manage media relations statewide during National Influenza Awareness Week and throughout flu season. Health district directors were provided electronic copies of these tool kits so they could be easily reproduced and customized for their district.

Based on the need to communicate with low literacy and other special populations, the communications team is developing a series of "talking posters" based on fables and folklore from a variety of cultural traditions. These will be disseminated to health departments and other public and private sector partners. The posters are an important social marketing tool as they can be downloaded and reproduced cost-effectively; tailored to meet the needs of a range of populations; and visually reinforce other existing communications tools. Culturally appropriate and literacy tested posters are currently in development to target the following populations in Virginia: English low-literacy, Spanish, Native American, Farsi, Russian, Tagalog, Korean, and Afro-Caribbean. These will be tested in local communities through local health departments.

As mentioned already, the pan flu video has been widely distributed statewide to a broad range of audiences. Nationally respected risk communications expert Vincent Covello, Ph.D., addressed health district and central office VDH leadership on best practices to manage the delivery of information to protect people, their families and communities during a public health emergency. His recommendations have been incorporated into Virginia-specific pandemic flu message maps.

Treatment Plans

All treatment planning has been collaborative with the healthcare community and specifically with the Commonwealth's 90 Acute Care Hospitals and the Virginia Hospital and Healthcare Association. Discussion of healthcare efforts is found in the following section addressing Medical Surge.

Mass vaccination plans have been developed and exercised at state and local levels. In the event of a pandemic, influenza vaccine in Virginia will be distributed in

accordance with provisions of the Commonwealth's Strategic National Stockpile Plan once normal vaccine distribution mechanisms are unable to accommodate the situation. Vaccine will be administered in accordance with priority groups determined by the Commissioner of Health based upon USPHS/DHHS and Pandemic Influenza Advisory Group recommendations. Local communities have the responsibility to plan for and implement Mass Vaccination Plans for the receipt, storage, re-distribution, monitoring and administration of influenza vaccine in their jurisdictions. Each health district maintains a Mass Vaccination Plan Annex that includes provisions for identification / designation of vaccination clinics, staffing, security, transportation alternatives and other logistics including the use of volunteer staff. VDH maintains a database of statewide Dispensing Site locations and points of contact. The goal of the Vaccine Delivery and Distribution Plan is to move available vaccine to targeted locations throughout the state. The vaccine must be moved quickly and the product integrity maintained. Movement of the vaccine to the primary SNS Receipt, Stage and Store location and subsequently to Health Districts, local health departments and associated community partners has been included in the planning effort. The input and counsel of stakeholders with expertise in security, freight forwarding, crowd management, and all other aspects of vaccine management, distribution, and administration, have also been incorporated into the plan.

In recognition of the time lag in development and production of sufficient strain specific vaccine, Virginia has focused much effort in the refinement of its Antiviral Distribution Plan. Governor Kaine has authorized the purchase of over 770,000 courses of antiviral medications. This state stockpile constitutes the Commonwealth's entire allocation under the DHHS antiviral discount purchase program, and is now centrally stored in Virginia with a private sector partner. It is hoped that the FDA will approve a shelf life extension program for the states, thereby protecting our investment and extending the longevity of these medications. In preparing for a possible pandemic flu event, the Commonwealth will distribute to the target population through a regional delivery network to private sector pharmacies, military (Tricare) clinics, community health centers, dispensing physicians, healthcare facilities, and local health departments.. The general tenets of this plan are:

- This stockpile of antivirals has been purchased with state funds and as such is under the control of Virginia Department of Health (VDH).
- This plan will not be implemented until there is an imminent or actual outbreak of pandemic influenza. The antivirals are specifically designated for use during a pandemic. If this occurs, state officials will authorize the release of this inventory. The stockpiles will be distributed through a pre-arranged distribution chain and will not require pre-stocking. Inventory replenishment will employ traditional means through the designated distributor.
- The distribution will be accomplished using the traditional medical model. Patients will obtain prescriptions from approved prescribers and present them to participating pharmacies for dispensing.
- The plan is designed to provide antivirals to treat up to 25% of the state's population. This percentage is based on worst case models from the 1918 Pandemic.
- All patients with valid prescriptions for the antivirals are eligible.
- Participating pharmacies will receive the medications at no charge.

- Participating pharmacies will dispense these antivirals at no charge.
- A tracking system will assure each individual receives only one course of treatment through the program.

Medical Surge

State Surge Capacity within 4 hours of event – Estimated 3,630 staffed beds available statewide for influx of surge patients within four hours of incident. Hospitals will immediately activate procedures to provide a rapid in-patient intake capability (i.e. stop elective procedures, expedite early discharges and utilize 100 percent of staffed beds). This immediate bed surge capacity in the NCR (Virginia) is 778.

Surge Capacity within 24 hours of event - 5,670 patient surge capacity above normally staffed beds statewide. This capacity is 50% more than the benchmark established by HHS (500 beds per million of population). Hospitals will activate procedures to provide maximum hospital based in-patient treatment facilities within the region (i.e. activate all available beds, utilize healthcare facility surge areas; i.e. out-patient services areas [same-day surgery, sleep study], conference rooms, semi-private conversions, medical office buildings, etc. With the help of HHS funding this capacity increase has been achieved within the past five years by: 1) enabling hospitals to expand capacity within the facility and in ancillary buildings on campus; 2) establish alternate care facilities at off-campus sites such as physician practices and urgent care centers, 3) purchase mobile medical facilities to expand capacity on campus or for deployment as needed. Bed surge capacity (within 24 hours) in the NCR (Virginia) is 1,110, which is slightly below the benchmark level (1,162) for that population area. The primary reason for this shortfall is that these urban area hospitals are already operating at close to capacity on a normal basis, and the capacity for on-campus growth is limited. In this area, more emphasis is being placed on establishing additional alternate care centers.

Alternate Care Sites (ACS): Virginia continues to identify additional potential sites to enhance capability for the treatment of patients in a pandemic or other medical surge scenario. These sites will provide supplemental surge capacity to the healthcare system through integration of local, state and federal resources in safe, sustainable alternate care sites located in communities throughout the Commonwealth. An ACS model of operations will optimize the allocation of scarce medical resources through a process developed collaboratively by healthcare coalition partners and adopted by the ACS staff of volunteer health professionals, community providers with guidance from hospital based providers.

Mobile Medical Facilities: Use of mobile medical assets is a valuable option for providing medical stabilization and treatment outside of hospitals. The same model of Stabilization and Treatment in Place (S.T.I.P) units is now in place in four of the six hospital regions in Virginia. When deployed, the combined patient capacity of these mobile facilities is approximately 200-250. Additional work is needed for continued development of these assets in order to expand the current patient throughput capability, provide for more sustained operations, enhance the scope of treatment capability, train professional and volunteer staff, and evaluate deployment procedures and performance by inclusion in community, regional or statewide exercises. The envisioned final product

will provide a rapidly deployable mobile capability to provide medical stabilization and treatment in place in the vicinity of the event or in support of hospital operations. Mobile medical assets will be capable of limited independent operations with resources for facility support, medical supplies, equipment, pharmaceuticals and trained medical staff. These assets will be capable of deployment anywhere in the Commonwealth or in support of interstate response where needed to supplement medical surge capacity. In response to a pandemic medical surge, these mobile facilities will likely function as triage areas and diversion management resource points to help redirect patients to the most appropriate treatment site (hospital, ACS, clinic, home).

Expand Equipment, Supply and Pharmaceutical Cache through Vendor Managed Inventory (VMI). A VMI plan now under consideration proposes to provide medical surge materials in two primary locations. Each of these locations would manage a portion of the stored surge materials, proportionate to the designated patient base as determined by VDH in partnership with the healthcare provider community. These facilities will be positioned to provide immediate provision of materials, but physically located in separate parts of the Mid-Atlantic region. By this method, travel times can be enhanced to widely diverse part of the Commonwealth and the loss of any one facility will not eliminate the response capability. The purpose of these two primary support facilities is to ensure that the requested surge materials can be staged and delivered within a 12-24 hour fulfillment window. In addition to these two primary facilities, the vendor under consideration also maintains a series of secondary or remote distribution storage facilities. Acquisition of medical surge materiel occurs using the contractual opportunities or pricing available to the vendor. The product is then placed into storage at the least possible acquisition price. While in-stock, this material is managed as in-stock inventory. In addition to cost avoidance benefits, a VMI program, such as currently exists with the DOD, provides a continuing contractual assurance that the material requested during a time of crisis will be in the quantity and condition needed over any extended period of time. Any additional expenses for the delivery and staging of the material are incurred only if and when emergency situation arrives. Using a suggested stockpile list provided by HHS as a guide, the VMI will include:

- Respiratory ventilators and associated air-way management supplies
- Oxygen concentrators/generators
- Respiratory system monitors
- Personal Protective Equipment such as hand hygiene gel, gloves, gowns, full-face shields, masks, respirators, medical waste bags, sanitary equipment, mortuary supplies (including body bags and tags, litters).

Strategic Planning and Exercising

All planning is derived from the envisioning and gap analyses which originate in the Commonwealth and its Agencies' strategic planning process. Pandemic Planning has evolved to its current iteration as Virginia's statewide, multi-agency, cross-functional Pandemic Influenza Plan. The plan has been developed by the Commonwealth Preparedness Working Group with oversight from the Governor's Office of Commonwealth Preparedness, and has been exercised, updated and validated regularly. Virginia conducts a proactive, robust exercise program. In August, 2006, VDH hosted a

statewide Pandemic Influenza Tabletop Exercise. As with all our exercises, it was Homeland Security Exercise and Evaluation System (HSEEP) compliant. Lessons learned were collected and analyzed; shortfalls were identified and turned into new exercise objectives for retesting. A follow-on statewide functional exercise was conducted in October '06. It tested many scenario-based response objectives, exercised the deployment of the Strategic National Stockpile, tested Isolation and Quarantine procedures, cross-border coordination in the national Capitol region (NCR) with MD and DC and mass vaccination, and non-pharmaceutical interventions such as social distancing, school closings and public event cancellations. All thirty-five local health districts participated, operating 77 clinics and vaccinating 10,795 citizens with state-provided annual flu vaccine. This last element produced a set of performance metrics which will be retested this flu season with a new target audience of 10,000.

Last month, Governor Kaine led a Cabinet-level Pandemic Flu Tabletop Exercise conducted in the State Emergency Operations Center. All Cabinet Principals, their staffs and agency heads participated. The exercise focused on executive level decision making and emphasized communication, coordination, problem identification and resolution. Identified legal issues attendant to a pandemic were then addressed by the Commonwealth's Attorney General's Office September 26 Tabletop Exercise with partnering state agencies and local representatives. Virginia Department of Health and the Centers for Disease Control and Prevention have scheduled a Tabletop Exercise on October 9 to look at the implications of social distancing in a pandemic. In November, Virginia intends to fully participate in a National Governors' Association Regional Pandemic Exercise in the NCR.

Protection of First Responders and Other Critical Personnel

State and regional caches of 5-day anti-viral treatment courses are in place to provide treatment courses to over 37,000 hospital staff, approximately 30% of the Commonwealth's hospital workers. This is in addition to the state purchased cache of anti-viral medication to treat members of the public who develop influenza.

Antiviral medications will be dispensed to other key personnel as described above in the Treatment Plans section. Antivirals are in sufficient quantity to allow for this. Should unanticipated shortfalls be identified, prioritization will be enforced.

As stated earlier, vaccine will be administered in accordance with priority groups determined by the Commissioner of Health based on USPHS/DHHS and Pandemic Influenza Advisory Group recommendations. For priority groups that have been identified, VDH central office and local health departments will:

- Determine whether vaccine will be shipped directly to vaccine providers or to public health departments for further distribution. At this time, distribution through local health departments is planned.
- Identify organizations that will provide vaccination to persons in priority groups (e.g., local health departments, occupational health clinics, private clinics identified by the employer or union of an occupational group). At this time vaccination by local health departments is preferred.
- Identify contacts and obtain written commitments from each clinic or facility responsible for vaccinating a priority group.

- Work with these contacts to develop strategies for rapid distribution and administration of vaccines, taking into account vaccine security issues, cold chain requirements, and transport and storage issues.
- Estimate the size of the priority groups that will be vaccinated based on extrapolation from national data or on local data, where available.
- Identify locations for vaccination clinics that will be operated by health departments and enter into memoranda of agreement with organizations that agree to provide vaccinators or other staff.
- Develop procedures for collecting, removing, and disposing of used syringes, needles, and other vaccination supplies.
- Develop a plan for training vaccinators and other staff responsible for mass vaccination.
- Maintain a vaccine database.

Summary

In summary, Virginia has planned extensively for a possible pandemic of influenza with a broad rage of partners and stakeholders within Virginia as well as with partners in the Maryland and Washington DC portions of the NCR. While a great deal has been accomplished, much remains to be addressed. As with overall emergency planning in the NCR, collaboration among Virginia, Maryland and Washington DC in planning for a possible pandemic of influenza has been extensive and productive. Increased direct involvement of federal agencies in this planning process is needed, both to assure appropriate coordination of efforts and to guarantee that federal employees receive appropriate information and care within the jurisdictions where they live. Thank you for the opportunity to address this committee.

Government of the District of Columbia

Testimony of
Darrell Darnell, Director of the Homeland Security and Emergency Management Agency for the District of Columbia

Preparing the National Capital Region for a Pandemic

Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia
Senator Daniel K. Akaka, Chairman
Senator George V. Voinovich, Ranking Member

October 2, 2007

Room SD 342
Dirksen Senate Office Building
Washington, DC 20510
10:00 A.M.

Testimony of the District of Columbia
Subcommittee on Oversight of Govt. Management; the Federal Workforce; and the District of Columbia
Public Hearing: Securing the National Capital Region: Preparing the National Capital Region for a Pandemic

Mr. Chairman, Mr. Ranking Member and members of the Subcommittee, thank you for the opportunity to appear today to discuss pandemic preparedness in the National Capital Region (NCR).[1] I am Darrell Darnell, the director of the Homeland Security and Emergency Management Agency for the District of Columbia and I have submitted my written testimony for the record on behalf of Mayor Adrian Fenty.

Pandemic

A major difference between a pandemic and natural disasters such as a tornado or hurricane, or intentional release of a biological, radiological or chemical agent, is that a pandemic is likely to cause both widespread and sustained effects and is thus likely to stress the resources of every state. This broad resource strain will make it difficult to shift resources between states and reinforces the need for each state to develop a plan, reflecting a substantial degree of self-reliance.

Several specific features that set a pandemic apart from other public health emergencies or community disasters are:

- Pandemics are unpredictable and arrive with very little warning.
- Outbreaks are expected to occur simultaneously throughout much of the U.S., preventing shifts in human and material resources that usually occur in the response to other disasters. Localities must be prepared to rely on their own resources to respond.
- Because of the high degree of infectiousness of a pandemic, the number of persons affected will be high.
- Health care workers and other first responders will be at higher risk of exposure and illness than the general population, further straining the health care system.
- Effective prevention and therapeutic measures, including vaccine and antiviral agents, will be in short supply, contributing to public concern.
- Widespread illness in the community will increase the likelihood of sudden and potentially significant shortages of personnel in other sectors who provide critical community services (military personnel, police, firefighters, utility workers, transportation workers).

[1] Title 10, United States Code, Section 2674 (f)(2) provides the following definition:
The term "National Capital Region" means the geographic area located within the boundaries of (A) the District of Columbia, (B) Montgomery and Prince Georges Counties in the State of Maryland, (C) Arlington, Fairfax, Loudoun, and Prince William Counties and the City of Alexandria in the Commonwealth of Virginia, and (D) all cities and other units of government within the geographic areas of such District, Counties, and City.

For the reasons stated above, the District's response to a pandemic will include significant governmental coordination, communication to the public, testing of our plans through exercises, increased medical surge capacity, and first responder protection.

Coordination

District

The District's Pandemic Influenza Preparedness Plan provides a framework for the District of Columbia to prepare for and respond to a pandemic. The plan is based upon the pandemic phases determined by the CDC in collaboration with the World Health Organization (WHO). The phases range from early identification of a virus to resolution of pandemic cycling. These phases help identify the estimated impact of a pandemic on the District of Columbia government, residents, workers, and visitors. Following these guidelines, the District's plan prescribes necessary activities and identifies responsible parties by pandemic phases. These declared and defined phases will help ensure a consistent and coordinated response by all responsible agencies and stakeholders in the event of an influenza pandemic event.

Regional

In an effort to facilitate collaboration in the area of homeland security, the region's leadership has established Regional Programmatic Working Groups (RPWG) to develop and oversee programs and their associated projects within the region. The intent of the RPWGs is to build, sustain and share capabilities among the NCR states and jurisdictions and develop performance measures to allow us to gauge our preparedness within the region.

The Health and Medical Regional Programmatic Working Group, a subset of Regional Emergency Support Function 8 (Health Officer's Committee), along with the Bio-Emergency Planners Subcommittee, which addresses mass vaccination and mass dispensing issues, and the Surge Subcommittee, which addresses mass fatality planning throughout the NCR, provide forums for regional planning and cooperation related to pandemic preparation.

In addition to collaboration with its regional partners, the District of Columbia works closely with the federal Interagency Working Group on Emergency Preparedness to address planning and preparedness with our federal counterparts. The District also has the unique experience of working closely with the U.S. Department of Health and Human Services and other federal agencies and departments during National Special Security Events (NSSE).

This type of collaboration is not limited to government entities. The District has developed partnerships with the business community, including building property owners and managers as well as the city's hospitality industry in order to enhance preparedness and response efforts. As recently as September 10, 2007, city agencies, including my agency, the Homeland Security and Emergency Management Agency, and the

Department of Health took part in a tabletop exercise at the Washington Convention Center that included a scenario involving an outbreak of food borne illness among guests at area hotels. We also have enhanced relationships with District hospitals, primary care clinics, and university health centers to ensure a more integrated response during a large scale event such as a pandemic.

Communication

Before, during, and after an emergency, the main purpose of communication is to provide timely, accurate, and easily understood information and instructions to the public. The lines of communication into and out of the District of Columbia Department of Health (DOH) to the many agencies responsible for disseminating information before, during and after a health emergency must be clear and precise.

Public education efforts have included a symposium in late April 2006 and posting on the Department of Health website of pandemic influenza information, including the city's Pandemic Influenza Plan, fact sheets and pan flu preparedness checklists for media and law enforcement. DOH is in the process of developing checklists for schools and businesses. The checklists provide guidance for organizations in developing and improving their pandemic influenza response and preparation plans.

In the event that it becomes necessary to provide emergency notification and information to citizens regarding protective actions, distribution of medication or other related matters, the District will utilize Alert DC, its four-part citizen emergency notification system. The system consists of:

- a text alert system that allows citizens to register online to receive emergency text messages on any text capable device;
- a voice alert system that allows emergency officials to select a specific geographic area and call the land line telephones in that area and leave a recorded message;
- the Emergency Information Center website, an online repository of information about various types of emergencies and the official online source of real-time information during emergencies, and
- the Emergency Alert System, the partnership between government and the broadcast industry that allows emergency officials to interrupt regular programming to broadcast emergency information.

The city also would use commercial media outlets to provide information to the public. Regularly scheduled press conferences, similar to the ones held by the city during its response to the anthrax incidents at the Hart Senate Office Building and at what is now called the Curseen/Morris Mail Processing and Distribution Center (formerly the Brentwood Postal Facility) would be held in order to make available the most current and up to date information.

Public information officers and other communications officials at District of Columbia agencies, including the Homeland Security and Emergency Management Agency, the Office of the Attorney General, the Department of Mental Health, the Fire and Emergency Medical Services Department and the Department of Health completed a two-day course, "Crisis and Emergency Risk Communication: Pandemic Influenza Region III" conducted in September 2006 by the U.S. Centers for Disease Control. Communications and public information personnel from health and safety agencies throughout HHS Region III took part in the training. In addition, the members of RESF-15 have received training in crisis communication and "message mapping", a technique that uses groups of short, succinct messages to convey emergency information.

Exercises

In order to help ensure the efficacy of its planning and training efforts, the District has conducted a number of pandemic influenza related exercises during the 2007 fiscal year.

On October 23 – 25, 2006, the D.C. Department of Health organized a region-wide pandemic influenza drill. During the exercise, the D.C. government demonstrated its capacity to work collaboratively in a multi-agency response that included the D.C. Public Schools, as well as its ability to safely and securely receive, transport, and deliver Strategic National Stockpile assets from the Northern Virginia regional warehouse to several designated sites in the District. Receipt, storage, and staging (RSS) warehouse operations were secure and efficient, even with several untrained staff members. DOH also successfully set up and operated two Quick Delivery Centers for distributing antibiotics to the public.

A March 28, 2007, tabletop exercise with public, private and charter schools provided a forum to discuss Department of Health (DOH) decision-making in the event of a pandemic flu outbreak. The event raised awareness of the impact of closing K-12 school buildings and helped clarify the responsibilities of participating agencies. Participants reviewed current plans to determine how to address school closures and identified gaps in coordination between agencies required to support such closures. The exercise helped promote the continued planning and refinement of current pandemic influenza plans. It also improved understanding of the interagency decision-making process. Furthermore, the forum provided the Centers for Disease Control and Prevention (CDC) with data to formulate a National Community Containment Preparedness Policy.

Finally, the D.C. government sponsored a tabletop exercise on implementing the District's Strategic National Stockpile (SNS) Antiviral Distribution plan on July 31, 2007. Benefits included Department of Health (DOH) staff members and supporting stakeholders becoming more familiar with their roles and responsibilities in activating the DC SNS Plan, in addition to an improved multi-agency response to effectively and securely receive, process and transport antiviral drugs. The exercise has contributed to the creation of better national policy and guidance to the Centers for Disease Control / Strategic National Stockpile (CDC/SNS). D.C. now has adequate facilities for the receipt,

storage and distribution of antivirals, personal protective equipment and other resources. The event helped identify the proper agencies tasked with maintaining the safety and integrity of facilities and resources. Moreover, there is a better understanding of which jurisdictional resources and assets could benefit the community during a large-scale public health event.

Over the past few years, the Commonwealth of Virginia, the State of Maryland, and the District of Columbia have developed Pandemic Influenza Response Plans and have exercised those plans on a regular basis. The larger nonprofit community has not participated in these regional exercises. In the event of a regional public health emergency, such as Pandemic Flu, the nonprofit community will also play a critical response and recovery role. On October 17, 2007, an exercise will be held to allow nonprofits to test their Continuity of Operations (COOP) plans using a Pandemic Flu scenario. This exercise will also be useful in identifying regional shortfalls, or gaps in nonprofit emergency preparedness.

These exercises have in the past and will in the future serve to familiarize D.C. personnel and the public with pandemic response plans, and they have demonstrated the ability of D.C. agencies to coordinate their response effectively. Collaboration and communication with regional partners has improved. The District is now confident in its ability to store, transport and distribute antibiotics to the public.

However, these exercises have also helped identify areas in need of improvement. D.C. now knows that it must invest in better planning and clearer guidelines among first responders, as well as improve coordination with hospitals and health care systems.

Medical Surge Capacity

Surge Bed Capacity

In the event of a pandemic influenza outbreak in the District of Columbia and National Capital Region, the number of patients seeking treatment at hospitals in the region would soar. The District and the National Capital Region have invested in increasing hospital surge capacity in previous years to expand hospitals' ability to accept larger than normal volumes of patients. The term "bed" reflects not only the patient bed, but also the supplies, equipment, and pharmaceuticals that accompany the bed, such as cardiac monitors, wheelchairs, cots, HEPA filter machines, stretchers and other support equipment. Throughout the NCR, the number of additional "surge" beds that were created is 2,367 – approximately 1/3 of these are located in hospitals in the District.

However, even with additional bed capacity built into hospitals in the District, the volume of patients seeking treatment in a pandemic will be greater than the number of hospital beds will accommodate. Recognizing this, the District has implemented a federally compliant HAvBED system to track hospital bed status and locate the hospitals that have room for additional patients. The District also has procured a large capacity ambulance bus that can transport 20 patients at a time to hospitals that have available

space for additional patients, and has also purchased a Mass Casualty Support Unit that can be deployed to treat up to 100 patients in the field.

Recognizing that hospitals are not the only locations that will receive patients in a pandemic, the District is assisting primary care clinics in the development of their emergency preparedness programs.

Mass Prophylaxis Dispensing Site Equipment and Supplies
The federally managed Strategic National Stockpile (SNS) of pharmaceuticals will come into play in the response to an outbreak of pandemic influenza. The federal side of the SNS is to deliver the pharmaceuticals to pre-designated sites for distribution – it is up to the District to ensure that the distribution sites are capable of receiving the SNS and distributing it to the public. The District and the National Capital Region have purchased equipment and medical supplies needed to open and operate mass prophylaxis dispensing sites in response to an outbreak of pandemic flu. If a vaccine or preventive treatment is available for the strain of flu, then these distribution sites would provide the means to distribute it to the public.

Syndromic Surveillance
One of the important aspects of response to a pandemic is identifying it at its earliest stages so that response efforts can get underway as soon as possible. Without early identification of an outbreak, it can spread quickly and grow out of control. The District of Columbia hospitals report diagnosed cases of influenza on a daily basis. These reports are compiled and compared against normal seasonal patterns. This monitoring will reveal an unusual or sudden spike in flu-like symptoms being reported at multiple hospitals and will notify public health officials of it early on. The neighboring states of Maryland and Virginia have similar systems, and the National Capital Region Syndromic Surveillance Network has been put in place to aggregate this data across jurisdictions.

First Responder Protection

In order to effectively treat the large number of affected individuals who will need medical treatment during a pandemic flu outbreak, it is critical that hospital, public health, and emergency medical services providers have adequate protection so that they themselves do not become infected.

The District of Columbia and the National Capital Region have purchased a large amount of protective equipment for health personnel in order to maintain their safety while treating the public during a pandemic, including:

- 2.5 million surgical masks
- 750,000 N-95 respirators
- Level C Powered Air Purifying Respirators (PAPRs)
- Level B Personal Protective Equipment (PPE)

Since health care workers and other first responders will be at higher risk of exposure and illness than the general population, we must ensure that they have appropriate protection so that they can perform their duties.

Conclusion

The District is continually preparing for a response to a pandemic through the following activities:

- Identifying public and private sector partners needed for effective planning and response;
- Planning for key components of pandemic influenza preparedness plan - surveillance, distribution of vaccine and antivirals, and communications;
- Integrating pandemic influenza planning with other planning activities conducted under CDC and HRSA's bioterrorism preparedness cooperative agreements with states;
- Coordinating with local areas to ensure development of local plans as called for by the state plan and providing resources, such as templates, to assist in the planning process;
- Assisting local areas in exercising plans; and
- Coordination with adjoining jurisdictions.

This concludes my formal testimony. Thank you again for the opportunity to testify before you today. I am ready to answer any questions you may have at this time.

United States Government Accountability Office

GAO

Testimony

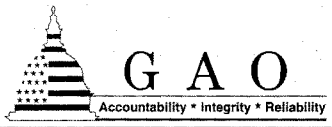
Before the Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia, Senate Committee on Homeland Security and Governmental Affairs

For Release on Delivery
Expected at 2:30 p.m. EDT
Thursday, October 4, 2007

GLOBAL HEALTH

U.S. Agencies Support Programs to Build Overseas Capacity for Infectious Disease Surveillance

Statement of David Gootnick, Director
International Affairs and Trade



GAO-08-138T

GAO

Highlights

October 4, 2007

GLOBAL HEALTH

U.S. Agencies Support Programs to Build Overseas Capacity for Infectious Disease Surveillance

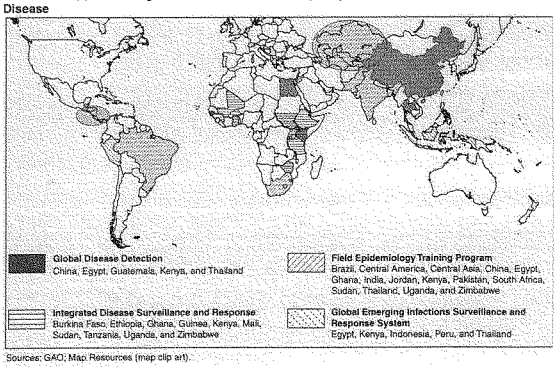
Why GAO Did This Study

What GAO Found

The U.S. government operates or supports four key programs (as shown in the graphic below) aimed at building overseas surveillance capacity for infectious diseases. In fiscal years 2004-2006, U.S. agencies obligated approximately $84 million for these programs, which operate in developing countries around the world. Global Disease Detection is CDC's main effort to help build capacity for infectious disease surveillance in developing countries. The Field Epidemiology Training Programs, which CDC and USAID support, are another tool used to help build infectious disease surveillance capacity worldwide. Additionally, USAID supports CDC and the World Health Organization's Regional Office for Africa in designing and implementing Integrated Disease Surveillance and Response in 46 countries in Africa, with additional technical assistance to 8 African countries. DOD's Global Emerging Infections Surveillance and Response System also contributes to capacity building through projects undertaken at DOD overseas research laboratories. USAID supports additional capacity-building projects in various developing countries.

For each of the four key surveillance capacity-building programs, the U.S. agencies monitor activities such as the number of epidemiologists trained, the number of outbreak investigations conducted, and types of laboratory training completed. In addition, CDC and USAID recently began systematic efforts to evaluate the impact of their programs; however, because no evaluations had been completed as of July 2007, it is too early to assess whether these evaluation efforts will demonstrate progress in building surveillance capacity.

Four U.S.-Supported Programs to Build Overseas Capacity for Surveillance of Infectious Disease



Sources: GAO; Map Resources (map clip art).

Mr. Chairman and Members of the Subcommittee:

Thank you for this opportunity to discuss GAO's recent work on U.S. efforts to strengthen international surveillance of infectious diseases.

Infectious diseases are a leading cause of deaths worldwide and represent the third most common cause of death in the United States. As the recent outbreaks and rapid spread of severe acute respiratory syndrome (SARS) and avian influenza[1] have shown, disease outbreaks pose a threat beyond the borders of the country where they originate. The United States thus has a clear interest in building capacity abroad to identify and respond to outbreaks of infectious disease. Effective disease surveillance systems in other countries contribute to lower morbidity and mortality rates and improved public health outcomes, both in those countries and elsewhere in the world.

Earlier efforts to improve surveillance worldwide focused on individual diseases, beginning with global influenza surveillance in the 1940s and followed by surveillance systems for smallpox and polio, among others. In the mid-1990s, recognizing the threat posed by previously unknown infectious diseases, the United States and other countries initiated a broader effort to ensure that countries can detect any disease outbreak that may constitute a public health emergency of international concern. Three U.S. agencies—the Department of Health and Human Services' Centers for Disease Control and Prevention (CDC), the U.S. Agency for International Development (USAID), and the Department of Defense (DOD)—have programs aimed at building this broader capacity to detect a variety of infectious diseases.

Today I will describe U.S. efforts to build developing countries' broader capacity for infectious disease surveillance, specifically: (1) the obligations, goals, and activities of key U.S. programs to develop epidemiology and laboratory capacity and (2) U.S. agencies' monitoring of the progress achieved by these programs. My statement—based on our report released today[2]—does not address U.S. efforts to build international

[1]In this report, "avian influenza" refers to the highly pathogenic form of this disease, which can cause nearly 100 percent mortality in infected poultry. The disease can also occur in low pathogenic forms that cause only mild symptoms in infected birds.

[2]GAO, *Global Health: U.S. Agencies Support Programs to Build Overseas Capacity for Infectious Disease Surveillance*, GAO-07-1186 (Washington, D.C.: Sept. 28, 2007).

capacity for surveillance of specific diseases, namely polio, tuberculosis, malaria, HIV/AIDS, or avian influenza. However, we recently issued reports on domestic preparedness for avian influenza outbreaks and on international efforts to prevent pandemic influenza.[3] In addition, we are beginning to examine, at the subcommittee's request, U.S. capacity to protect against naturally or intentionally introduced outbreaks of zoonotic diseases as well as lessons that can be learned from previous outbreaks in other countries.[4]

For our September 2007 report, we reviewed annual budgets, grants, and project funding for four infectious disease surveillance programs—Global Disease Detection (GDD), Field Epidemiology Training Programs (FETP), Integrated Disease Surveillance and Response (IDSR), and Global Emerging Infections Surveillance and Response System (GEIS)—and examined U.S. agencies' budget, planning, and reporting documents. In addition, we interviewed U.S. and World Health Organization (WHO) officials responsible for implementing capacity-building activities. We determined that the budget and performance data that we obtained had some limitations but were sufficiently reliable for our purposes. We did not make recommendations in our report. We conducted our work from October 2006 through July 2007 in accordance with generally accepted government auditing standards.

DOD, HHS, and USAID provided written comments on a draft of our September 2007 report, generally concurring with our findings. DOD provided information to clarify the extent of GEIS's global involvement, goals, and priorities. HHS provided additional information regarding GDD operations, noting that the GDD centers bring together CDC's existing international expertise in public health surveillance, training, and laboratory methods. Additionally, HHS indicated that disease-specific programs contribute to building surveillance capacity. USAID's comments

[3]GAO, *Avian Influenza: USDA Has Taken Important Steps to Prepare for Outbreaks, but Better Planning Could Improve Response*, GAO-07-652 (Washington, D.C.: June 11, 2007); *Influenza Pandemic: Efforts to Forestall Onset Are Under Way; Identifying Countries at Greatest Risk Entails Challenges*, GAO-07-604 (Washington, D.C.: June 20, 2007); *Influenza Pandemic: DOD Combatant Commands' Preparedness Could Benefit from More Clearly Defined Roles, Resources, Risk Mitigation*, GAO-07-696 (Washington, D.C.: June 20, 2007).

[4]Zoonotic infections are infections transmitted from animals to humans; examples include human cases of avian influenza, Ebola hemorrhagic fever, and rabies. According to the CDC, approximately 60 percent of all human pathogens are zoonotic.

also focused mainly on the support it provides to disease-specific and other activities that contribute to building surveillance capacity.[5]

Summary

In 2004-2006,[6] CDC, USAID, and DOD obligated about $84 million for four key programs, as well as additional activities, to develop capacity for the surveillance and detection of infectious diseases abroad.

- *Global Disease Detection (GDD).* CDC obligated about $31 million for capacity-building activities at GDD centers in China, Egypt, Guatemala, Kenya, and Thailand. GDD centers seek to enhance surveillance, conduct research, respond to outbreaks, facilitate networking, and train epidemiologists and laboratorians overseas.
- *Field Epidemiology Training Programs (FETPs).* CDC and USAID obligated approximately $19 million to support FETPs in 24 countries, in collaboration with host-country governments. In 2004-2006, these 2-year programs trained approximately 351 epidemiologists and laboratorians in infectious disease surveillance.
- *Integrated Disease Surveillance and Response (IDSR).* USAID obligated approximately $12 million to support CDC in designing and implementing the IDSR strategy with WHO's Regional Office for Africa (WHO/AFRO) in 46 African countries and in providing technical assistance to 8 of these countries. The IDSR strategy aims to integrate countries' existing disease-specific surveillance and response systems and link surveillance, laboratory confirmation, and other data to public health actions.
- *Global Emerging Infections Surveillance and Response System (GEIS).* For 2005-2006,[7] DOD obligated approximately $8 million through GEIS for more than 60 infectious disease surveillance projects to help build capacity in 32 countries where the projects were conducted. DOD's GEIS conducts surveillance of infectious diseases abroad to protect military health and readiness; capacity building occurs through its surveillance activities that focus on this goal.
- *Additional activities.* USAID's Bureau for Global Health and USAID missions obligated about $14 million in 2004-2006 for additional activities to build infectious disease surveillance capacity.

[5]For more information on our scope and methodology and to review agency comments, see GAO-07-1186.

[6]In this testimony, all years cited are fiscal years unless otherwise noted.

[7]Prior to 2005, GEIS funded the overseas laboratories directly, without a project-by-project breakdown.

U.S. agencies monitor activities for the four key surveillance capacity-building programs, including activities such as the numbers of epidemiologists trained, numbers of outbreak investigations conducted, and development of laboratory diagnostic capabilities. To systematically measure their programs' impact on disease surveillance capacity, CDC and USAID recently developed frameworks linking these activities to program goals. For example, in 2006, CDC developed frameworks for evaluating both the FETP and GDD efforts. However, because no evaluations had been completed as of July 2007, it is too early to assess whether these monitoring and evaluation efforts will demonstrate progress in building surveillance capacity. DOD does not plan to evaluate the GEIS program's impact on host countries' surveillance capacity, because it does not consider capacity building to be a primary program goal.

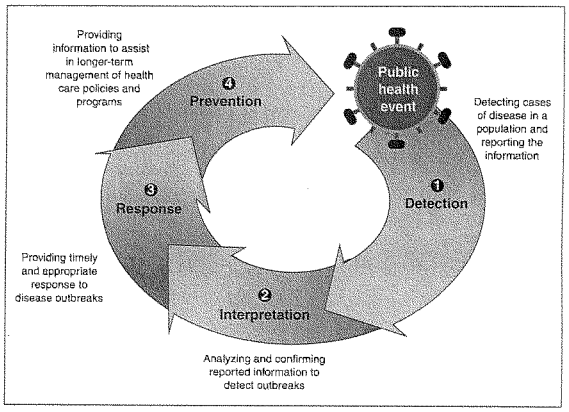
Background

Dramatic growth in the volume and speed of international travel and trade in recent years have increased opportunities for diseases to spread across international boundaries with the potential for significant health and economic implications. International disease control efforts are further complicated by, for instance, the emergence of previously unknown zoonotic diseases, such as Ebola hemorrhagic fever and avian influenza.[8]

Surveillance provides essential information for action against infectious disease threats. Basic surveillance involves four functions: (1) detection, (2) interpretation, (3) response, and (4) prevention. (See fig. 1.)

[8]Outbreaks of Ebola hemorrhagic fever, which have occurred in several African countries, are thought to originate from human contact with infected monkeys and spread among humans primarily through contact with infected persons. Outbreaks of avian influenza—spread by birds and sometimes infecting humans—have occurred in nearly 60 countries, killing millions of birds and more than 170 humans in 12 countries throughout Southeast Asia, the Middle East, and Africa as of 2007.

Figure 1: Elements of a Disease Surveillance System



Source: GAO analysis.

Global efforts to improve disease surveillance have historically focused on specific diseases or groups of diseases. For example, as we reported in 2001, the international community has set up surveillance systems for smallpox, polio, influenza, HIV/AIDS, tuberculosis, and malaria, among others, with the goal of eradicating (in the case of smallpox and polio) or controlling these diseases.[9] In 2006, the United States adopted a national strategy to prepare for pandemic influenza outbreaks both domestically and internationally, which included planned funding by U.S. agencies to support influenza surveillance and detection.[10] Such disease-specific efforts can build capacity for surveillance of additional diseases as well.

[9]GAO, *Global Health: Challenges in Improving Infectious Disease Surveillance Systems*, GAO-01-722 (Washington, D.C.: Aug. 31, 2001).

[10]GAO-07-604. Planned funding levels indicate agency budget projects for planning purposes.

The United States acknowledged the need to improve global surveillance and response for emerging infectious diseases in 1996, when the President determined that the national and international system of infectious disease surveillance, prevention, and response was inadequate to protect the health of U.S. citizens. Addressing these shortcomings, the 1996 Presidential Decision Directive NSTC-7 enumerated the roles of U.S. agencies—including CDC, USAID, and DOD—in contributing to global infectious disease surveillance, prevention, and response.

Enhancing capacity for detecting and responding to emerging infectious disease outbreaks is also a key focus of the revised International Health Regulations (IHR). For many years, the IHR required reporting of three diseases—cholera, plague, and yellow fever—and delineated measures that countries could take to protect themselves against outbreaks of these diseases. In May 2005, the members of WHO revised the IHR, committing themselves to developing core capacities for detecting, investigating, and responding to other diseases of international importance, including outbreaks that have the potential to spread. The regulations entered into force in June 2007; member states are required to assess their national capacities by 2009 and comply with the revised IHR by 2012.[11]

Four U.S.–funded Programs Help Build Capacity for Overseas Infectious Disease Surveillance

U.S. agencies operate or support four key programs aimed at building overseas surveillance capacity for infectious diseases: Global Disease Detection (GDD), operated by CDC; Field Epidemiology Training Programs (FETP), supported by CDC and USAID; Integrated Disease Surveillance and Response (IDSR), supported by CDC and USAID; and Global Emerging Infections Surveillance and Response System (GEIS), operated by DOD. USAID also supports additional capacity-building projects.

In 2004-2006, the U.S. government obligated about $84 million for these four programs (see table 1). Funding for these programs is obligated to support the ability of laboratories to confirm diagnosis of disease as well as the training of public health professionals who will work in their

[11]The revised regulations specify that each state party shall assess its systems within 2 years of the regulations entering into force on June 15, 2007. They also specify that each state party shall develop systems that meet the new requirements as soon as possible but no later than 5 years from the date the regulations enter into force. In certain circumstances, the revised regulations allow countries to request an extension of up to 4 years to develop systems that meet the requirements.

countries to improve capacity to detect, confirm, and respond to the outbreak of infectious diseases.

Table 1: U.S. Obligations for Programs Supporting Capacity Building for Infectious Disease Surveillance, 2004-2006

Dollars in millions

Program	Agency	Obligations				
		2004	2005	2006	Amounts provided only as 2004-2006 aggregates	Total
GDD	CDC	$6	$11	$14		$31
FETP	CDC[a]	2	2	3		$7
	USAID	2	3	1	$6	$12
IDSR[b]	USAID[c]	3	3	2	4	$12
GEIS	DOD	NA[d]	5	3		$8
Additional capacity-building activities[e]	USAID	4	4	2	4	$14
Total		**$17**	**$28**	**$25**	**$14**	**$84**

Sources: GAO analysis of CDC data, USAID grant awards, DOD project reports.

Note: There are two main limitations to the reliability of these data. First, the agencies do not track capacity building in their budget systems, and therefore we developed a methodology to identify activities that involved capacity building. The agencies concurred with this methodology and its results. Second, more than half (56 percent) of the $38 million identified as USAID obligations—about 25 percent of total identified obligations—are self-reported estimates by some of the USAID missions and bureaus. We were able to verify the remaining obligations, including obligations from other USAID missions, with documentation, and we determined that the data are sufficiently reliable. For additional information on data reliability, see GAO-07-1186.

[a]CDC also received approximately $2 million from non-U.S. government sources such as private foundations and the World Bank to assist with establishing FETPs. CDC treats these funds as core funds supporting its operations; however, we did not include them in our analysis, because they are not U.S.-appropriated funds.

[b]CDC received funds from the United Nations Foundation to support its work with IDSR. We did not include these funds in our analysis, because they are not U.S.-appropriated funds.

[c]USAID provides funding to CDC to support IDSR efforts.

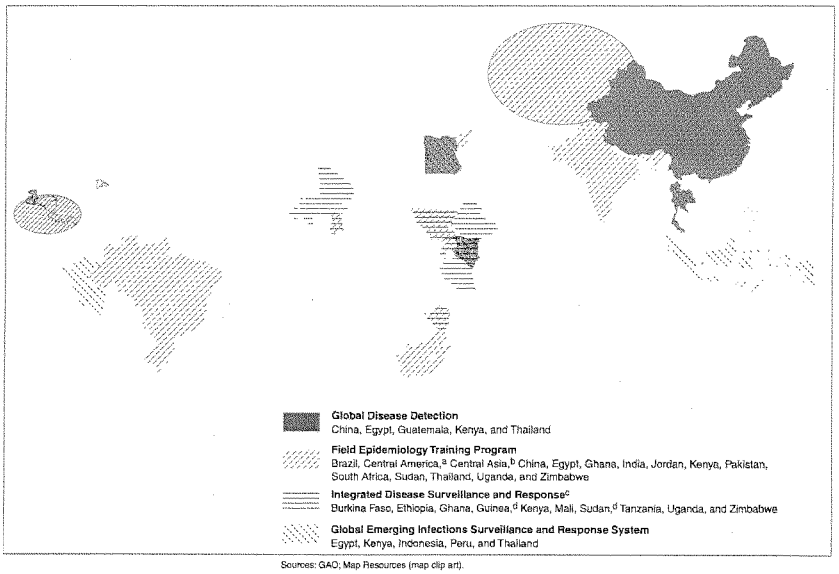
[d]NA = not applicable. DOD's project reporting system was not in place until 2005.

[e]Additional capacity-building activities include projects supported by USAID's missions in country. This amount does not include obligations from USAID's Egypt mission, which conducted capacity-building activities for infectious disease surveillance from 2004 through 2006 but was not able to determine specifically how much funding went to these activities.

Collectively, these four programs operate in 26 developing countries. (See fig. 2.) To limit duplication and leverage resources in countries where some or all of the capacity-building programs operate, CDC, DOD, and USAID coordinate their efforts by colocating activities, detailing staff to

each other's programs, participating in working groups, and communicating by phone.[12]

Figure 2: Countries with GDD-, FETP-, IDSR-, or GEIS-Related Activities Supported by U.S. Agencies, 2004-2006



Sources: GAO; Map Resources (map clip art).

[a]Costa Rica, Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, and Panama participated in the Central America FETP in 2004-2006.

[12]GAO has identified eight practices that agencies can use to enhance and sustain their collaborative efforts, including developing mechanisms to monitor, evaluate, and report on them. See GAO, *Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies*, GAO-06-15 (Washington, D.C.: Oct. 21, 2005).

[b]Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan participated in the Central Asia FETP in 2004-2006.

[c]CDC and USAID provided direct assistance to these countries in implementing WHO/AFRO's IDSR; in addition, WHO/AFRO is working with other countries in Africa to implement IDSR.

[d]CDC support for IDSR implementation in Guinea and southern Sudan was funded by the United Nations Foundation.

Global Disease Detection

GDD is CDC's primary effort to build public health capacity to detect and respond to existing and emerging infectious diseases in developing countries, according to CDC officials.[13] In 2004-2006, CDC obligated about $31 million to support GDD capacity-building efforts. GDD's goals are to

- enhance surveillance,
- conduct research,
- respond to outbreaks,
- facilitate networking, and
- train epidemiologists and laboratorians.

Established in 2004, GDD aims to set up a total of 18 international centers that would collaborate with partner countries, surrounding regions, and WHO to support epidemiology training programs and national laboratories and conduct research and outbreak response around the world. Two GDD centers were established in Kenya and Thailand in 2004, and three centers are currently under development in Egypt, China, and Guatemala.[14] In addition, CDC established a GDD Operations Center in Atlanta to coordinate information related to potential outbreaks.

According to CDC officials, GDD capacity-building activities consist of strengthening laboratories, providing epidemiology training, and conducting surveillance activities. CDC aims to establish laboratories with advanced diagnostic capacity—for example, in Kenya, CDC established

[13]In developing GDD, CDC drew on its existing international expertise in public health surveillance, training, and laboratory methods and brought together three previously established programs: FETPs, the International Emerging Infections Program (IEIP), and influenza activities.

[14]The long-term applied epidemiology training program in Guatemala is referred to as the Central America FETP.

several laboratories with biosafety levels 2 and 3.[15] GDD centers conduct formal, 2-year training programs in analyzing epidemiological data, responding to outbreaks, and working on research projects.[16] The centers also conduct short-term training—for example, in 2006, GDD centers trained more than 230 participants from 32 countries to respond to pandemics. In addition, the centers provide opportunities for public health personnel in host countries to work with CDC to evaluate existing surveillance systems, develop new systems, write and revise peer-reviewed publications, and use surveillance data to inform policy decisions.

Field Epidemiology Training Programs

Assisted by USAID and WHO, and at the request of national governments, CDC has helped countries establish their own FETPs to strengthen their public health systems by training epidemiologists and laboratorians in infectious disease surveillance.[17] CDC and USAID obligated approximately $19 million to support these programs in 2004-2006. Each FETP is customized in collaboration with country health officials to meet the country's specific needs, emphasizing

- applied epidemiology and evidence-based decision making for public health actions;
- effective communication with the public, public health professionals, and the community; and
- health program design, management, and evaluation.

[15]Biosafety addresses the safe handling and containment of infectious microorganisms and hazardous biological materials. Levels of containment range from 1 (lowest) to 4 (highest) and depend on the risk of infection, severity of disease, likelihood of transmission, nature of work being conducted, and origin of the infectious disease agent.

[16]These long-term programs are FETPs that existed prior to the establishment of the GDD centers and are now operating as part of the centers. The FETPs in GDD countries are implemented and supported by CDC in a manner similar to the FETPs in non-GDD countries.

[17]The FETP model is based on CDC's Epidemic Intelligence Service, which began in 1951. In addition to the FETPs, there are also three Field Epidemiology and Laboratory Training Programs in Kenya, Pakistan, and South Africa. These are included in our discussion of FETPs.

CDC and USAID collaborate with host-country ministries of health in Brazil, Central America,[18] Central Asia,[19] China, Egypt, Ghana, India, Jordan, Kenya, Pakistan, South Africa, Sudan, Thailand, Uganda, and Zimbabwe to build surveillance capacity through the FETPs. In addition to receiving formal classroom training in university settings, FETP students and graduates participate in surveillance and outbreak response activities, such as analyzing surveillance data and performing economic analysis, and publish articles in peer-reviewed bulletins and scientific journals. At the end of the 2-year program, participants receive a postgraduate diploma or certificate.

According to CDC, these programs graduated 351 epidemiologists and laboratorians in 2004-2006. As of February 2007, according to CDC, six programs established between 1999 and 2004[20] tracked their graduates and found that approximately 92 percent continued to work in the public health arena after the training. For example, in Jordan, 21 of 23 graduates of its FETP are working as epidemiologists at the central and governorate levels.

Integrated Disease Surveillance and Response

USAID has supported CDC in (1) designing and implementing IDSR, with WHO/AFRO, in 46 African countries and (2) providing technical assistance to 8 of these countries. In 2004-2006, USAID obligated approximately $12 million to support IDSR, transferring about one-quarter of this amount to CDC through interagency agreements and participating agency service agreements. IDSR's goal is to use limited public health resources effectively by integrating the multiple disease-specific surveillance and response systems that exist in these countries and linking surveillance, laboratory confirmation, and other data to public health actions.

CDC has collaborated with WHO/AFRO in developing tools and guidelines, which are widely disseminated in the region to improve surveillance and response systems. CDC's assistance has included

[18]In 2004-2006, the Central America FETP, based in Guatemala, trained students from Costa Rica, the Dominican Republic, El Salvador, Guatemala, Honduras, Nicaragua, and Panama. Panama's participation is funded by CDC's Global AIDS Program.

[19]Kazakhstan, Kyrgyzstan, Tajikistan, and Uzbekistan participated in the Central Asia FETP in 2004-2006.

[20]The six programs are in Brazil, Central Asia, Central America, India, Jordan, and Kenya.

- developing an assessment tool to determine the status of surveillance systems throughout Africa,
- developing technical guidelines for implementing IDSR,
- working to strengthen the national public health surveillance laboratory systems, and
- conducting evaluations of the cost to implement IDSR in several African countries.

In addition, CDC is providing technical assistance to eight countries in Africa,[21] which CDC and USAID selected as likely to become early adopters of surveillance best practices and therefore to be models for other countries in the region. With funding from USAID, CDC has undertaken activities in these countries such as evaluating the quality of national public health laboratories in conjunction with WHO, developing a district-level training guide (published in English and French) for analyzing surveillance data, and developing job aids for laboratories to train personnel in specimen-collection methods.

Global Emerging Infections Surveillance and Response

DOD established GEIS in response to the 1996 Presidential Decision Directive NSTC-7 on emerging infectious diseases, which called on DOD to support global surveillance, training, research, and response to infectious disease threats. In 2005-2006, DOD obligated approximately $8 million through GEIS to build capacity for infectious disease surveillance. GEIS, as part of its mission, provides funding to DOD research laboratories in Egypt, Indonesia, Kenya, Peru, and Thailand[22] as well as to other military research units for surveillance projects located in 36 countries, according to DOD officials,. GEIS conducts many projects jointly with host-country nationals, providing opportunities to build capacity through their participation in disease surveillance projects. GEIS officials noted that they view its primary goal as providing surveillance to protect the health of U.S. military forces and consider capacity building a secondary goal that occurs as a result of surveillance efforts.

[21]CDC and USAID have supported the implementation of IDSR in Burkina Faso, Ethiopia, Ghana, Kenya, Mali, Tanzania, Uganda, and Zimbabwe. In addition, CDC has supported the implementation of IDSR in Guinea and southern Sudan, funded by the United Nations Foundation.

[22]The laboratories are under the command of the U.S. Army in Kenya and Thailand and the U.S. Navy in Egypt, Indonesia, and Peru.

GEIS funded more than 60 capacity-building projects in 2005 and 2006,[23] supporting activities such as establishing laboratories in host countries, training host-country staff in surveillance techniques, and providing advanced diagnostic equipment. For example, in Nepal, GEIS funded surveillance of febrile illnesses, such as dengue fever, and through this project provided a field laboratory with training and equipment to conduct advanced diagnostic techniques. GEIS has also funded more direct training; for example, the laboratory in Peru conducted an outbreak-investigation training course for public health officials from Peru, Argentina, Chile, and Suriname in 2006 with GEIS funding.

Additional Capacity-building Activities

Funding provided by USAID's Bureau for Global Health and USAID missions has supported additional activities to build basic epidemiological skills in developing country health personnel. In 2004-2006, USAID obligated about $14 million for these activities. For example, USAID funded a WHO effort to assist the government of India in improving disease surveillance, including strengthening laboratories, developing tools for monitoring and evaluating surveillance efforts, and creating operational manuals for disease surveillance.

Agencies Monitor Surveillance Capacity Building Activities and Have Begun to Evaluate Programs' Impact

The U.S. agencies operating or supporting the disease surveillance capacity building programs collect data to monitor the programs' activities. CDC and USAID also recently began systematic efforts to evaluate program impact, but it is too early to assess whether the evaluations will demonstrate progress in building surveillance capacity.

- *GDD.* Since 2006, CDC has monitored the number of outbreaks that GDD has investigated, the numbers of participants in GDD long-term and short-term training, and examples of collaboration among GDD country programs. In addition, in 2006, CDC developed a framework for evaluating progress toward GDD's five goals[24] and collected data for 8 of 14 indicators. (Fig. 3 shows the GDD evaluation framework.) However, as of July 2007, the agency had not collected data on the two surveillance indicators to evaluate the program's contribution to improved surveillance.

[23]A breakdown of individual project data is not available prior to 2005, which is when GEIS began awarding funding for individual projects to the DOD overseas laboratories. Prior to that, GEIS obligated a fixed amount to each laboratory.

[24]GDD's five goals are surveillance, research, outbreak response, networking, and training.

Figure 3: Framework for Evaluating Impact of GDD

Outbreak investigation and response	Surveillance	Research	Training	Networking and communications
Number and proportion of outbreaks of priority conditions that are investigated with GDD response center assistance	Number and proportion of priority diseases for which population-based incidence can be monitored over time	Number of peer-reviewed articles published	Number of graduates from long-term training programs or participants in short-term training programs	Number of collaborations between response centers
Number and proportion of GDD outbreak investigations for which laboratory analysis yielded a confirmed cause	Proportion of laboratory samples collected through surveillance activities submitted for laboratory analysis that were successfully processed and reported	Number of presentations (oral or poster) at international scientific meetings	Number and proportion of trained graduates who hold public health leadership positions	Improvements in standardization of surveillance systems and training approaches across response centers
Timeliness of response to outbreaks of priority conditions		Number of new pathogens described		Timeliness of reporting of outbreaks of priority conditions to GDD Operations Center
Timeliness of specimen shipment between GDD response center and Atlanta				

Source: Centers for Disease Control and Prevention.

- *FETP.* CDC has collected data such as the numbers of FETP trainees and graduates, the numbers of FETP graduates hired by public health ministries, the number of outbreak investigations conducted, and the number of surveillance evaluations conducted. In 2006, CDC developed a framework for monitoring and evaluating FETPs' impact on countries' health systems, with 13 indicators related to FETP activities (see fig. 4 for the FETP indicators). CDC hopes to implement the framework fully by 2009, but because FETPs are collaborations between CDC and the host countries, the framework's implementation depends on country cooperation.

Figure 4: Indicators for Evaluating Impact of FETPs

- Number of graduates
- Number of investigations of acute health events
- Planned studies conducted
- Surveillance systems data analyzed and used
- Local/regional dissemination of trainee/officer and program work
- Presentations to international scientific conferences
- Peer-reviewed publications
- Strengthened public health workforce
- Surveillance system improved/expanded by program and/or trainees
- Evidence-based public health action for acute health events improved/expanded by program and/or trainees
- Evidence-based public health programs/projects started because of graduates, programs, and/or trainees
- Evidence-based policies/regulations created or improved because of programs and/or trainees
- National and/or regional public health professional network of graduates

Source: Centers for Disease Control and Prevention.

- *IDSR.* Since 2000, CDC has collected data on activities completed under its IDSR assistance program, including the number of job aids developed, the training materials adopted, and the number of training courses completed, and it reports on these activities annually to USAID. In 2003, WHO/AFRO adopted 11 indicators, developed with input from CDC and USAID, to monitor and evaluate progress in implementing IDSR in Africa (see fig. 5 for the IDSR indicators). According to WHO/AFRO, 19 of 46 African countries reported data in 2006 for at least some of these indicators, showing some success in IDSR implementation; however, U.S. agencies cannot require the collection of data in the remaining countries that did not report on the indicators, because IDSR is a country-owned program. Separately, in 2005, CDC completed an evaluation of IDSR implementation in 4 of the 8 countries where it assists with IDSR—Ghana, Tanzania, Uganda, and Zimbabwe—and, using a set of 40 indicators based on WHO guidance,[25] found that these countries had implemented most of the elements of IDSR.

[25]World Health Organization, *Protocol for the Assessment of National Communicable Disease Surveillance and Response Systems: Guidelines for Assessment Teams*, WHO/CDS/CSR/ISR/2001.2 (Geneva: 2001).

Figure 5: Indicators for Evaluating Impact of IDSR

- Proportion of health facilities submitting weekly or monthly surveillance reports on time to the district level
- Proportion of districts submitting weekly or monthly surveillance reports on time to the next higher level
- Proportion of cases of diseases targeted for elimination or eradication and any other diseases selected for case-based surveillance, which were reported to the district using case-based or line listing forms
- Proportion of suspected outbreaks of epidemic-prone diseases notified to the next higher level within 2 days of passing the epidemic threshold
- Proportion of districts with current trend analysis (line graphs) for selected diseases
- Proportion of reports of investigated outbreaks that include analyzed case-based data
- Proportion of investigated outbreaks with laboratory results
- Proportion of confirmed outbreaks with a nationally recommended public health response
- Case fatality rates for outbreaks of priority diseases
- Attack rates for outbreaks of epidemic-prone diseases
- Proportion of epidemics detected at regional and national levels through analysis of surveillance data from districts and that were missed by the district level

Source: World Health Organization.

- *GEIS.* Since 2005, DOD has monitored GEIS capacity-building activities through individual project reports that detail each activity completed, such as training for staff involved in surveillance studies and development of laboratory diagnostic capabilities. According to GEIS officials, DOD does not plan to develop a framework to monitor and evaluate the impact of GEIS on countries' surveillance capacity, because capacity building in host countries is not GEIS's primary purpose. Rather, GEIS's goal is to establish effective infectious disease surveillance and detection systems with the ultimate aim of ensuring the health of U.S. forces abroad. However, GEIS has reviewed some of its surveillance projects,[26] and GEIS officials stated that the program's activities in the host nations have led to improved surveillance capacity for infectious diseases.

Mr. Chairman, this concludes my statement. I would be happy to respond to any questions you or other members of the subcommittee may have at this time.

[26]In addition, the Institute of Medicine completed a review of GEIS in 2001 and DOD officials told us that IOM was nearing completion of a second evaluation of GEIS pandemic influenza activities as of September 2007.

GAO Contact and Staff Acknowledgment

For further information about this testimony, please contact David Gootnick at (202) 512-3149 or gootnickd@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this statement. Audrey Solis, Julie Hirshen, Reid Lowe, Diahanna Post, Elizabeth Singer, and Celia Thomas made key contributions to this testimony and the report on which it was based. David Dornisch, Etana Finkler, Grace Lui, Susan Ragland, and Eddie Uyekawa provided technical assistance.

Testimony
Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia
United States Senate

CDC's Global Disease Detection Program: Safeguarding our Nation

Ray Arthur, Ph.D.

Director
Global Disease Detection Operations Center
Centers for Disease Control and Prevention
U.S. Department of Health and Human Services

For Release on Delivery
Expected at 2:30pm
Thursday, October 4, 2007

Good afternoon, Chairman Akaka, Ranking Member Voinovich, and Members of the Subcommittee. I am pleased to be here to discuss CDC's Global Disease Detection program and other global health investments.

The scope and nature of CDC's global engagements have changed dramatically since they began in 1958 with CDC's work in malaria control, followed by a focus on cholera and smallpox outbreaks. In 1966, CDC became a key player in smallpox eradication and measles control in 20 African countries. CDC also provided expertise to address other infectious diseases such as polio and tuberculosis. Shortly after the discovery of HIV/AIDS, CDC began to work globally to address the epidemic and today continues to be on the front lines of this international response. The agency's global health mandate has since expanded to include other diseases and conditions, and also added the goal of protecting the U.S. and world population from emerging global threats. Currently, CDC has approximately 200 staff assigned to 50 countries throughout the world and supports an additional 1200 locally employed staff in these countries.

Today I will discuss CDC's Global Disease Detection (GDD) program, highlight CDC's international efforts in detecting and responding to avian influenza, and briefly describe for the Subcommittee CDC's capacity in detecting and responding to zoonotic diseases. Finally, I will briefly describe other CDC global health programs that make up pieces of an expanding network that is helping to build capacity for disease detection and response throughout the world.

GDD Program

Experience with Severe Acute Respiratory Syndrome (SARS) demonstrated that a highly pathogenic infectious disease in a remote region can spread around the world in a matter of days or weeks. In 2004, in response to infectious disease threats – whether caused by an intentional act of terrorism or the natural emergence of a deadly infectious virus - the U.S. Congress provided funding for CDC to establish a Global Disease Detection (GDD) program.

CDC's GDD vision is to protect the health of Americans and the global community by developing and strengthening public health capacity to rapidly detect and respond to emerging infectious diseases and bioterrorist threats that occur internationally. The GDD program was built from CDC's existing international expertise in public health surveillance, training, and laboratory methods, and brought together three previously established programs:

- Field Epidemiology Training Program (FETP), which builds and strengthens public health systems and trains scientists and public health practitioners in field epidemiology and laboratory methods. In addition to the FETPs located in the GDD centers, in collaboration with USAID, CDC provides support for an additional 19 countries that have either established, or are initiating FETPs;
- International Emerging Infection Program (IEIP), which integrates disease surveillance, research, prevention, and control activities; and
- Influenza activities, to focus specifically on development of influenza surveillance capacity – both laboratory and epidemiologic containment.

The GDD program effectively coordinates these existing CDC resources to build in-country capacity and enhance rapid response capacity for emerging infectious diseases. The scientists who work in these programs collectively represent an enormous and uniquely valuable U.S. resource of expertise in infectious disease detection and control (ranging from international leadership in the control of common infectious syndromes such as pneumonia, to cutting edge laboratory detection of rare viruses such as Ebola and SARS coronavirus). Thus, CDC is well-positioned to provide assistance and scientific input in responding to the full range of emerging disease threats. In addition, the broader CDC scientific community can be called upon in response to extremely unusual circumstances where additional expertise may be needed. The GDD program also coordinates with other global health programs at CDC and leverages resources to enhance detection and response to outbreaks. For example, staff from the Global AIDS Program played a critical role in the diagnosis of the first human case of avian influenza (H5N1) in Sub-Saharan Africa, which occurred in Nigeria in 2006. The GDD program then utilized its resources to deploy staff and continue response activities such as human surveillance and monitoring of avian influenza cases.

GDD Centers

The central focus of the GDD program is the establishment and expansion of GDD Centers. Strategically positioned around the world, these Centers are CDC-funded international centers of excellence in the detection and control of emerging infectious diseases that focus on five key activities: outbreak response, surveillance, research,

training, and networking. During non-emergency settings, the Centers work with country partners to build public health capacity in routine disease detection and response interventions that help to strengthen systems that will be used in times of crisis. However, in response to major international emergencies or large-scale disease outbreaks, the Centers typically function as members of the Global Outbreak Alert and Response Network (GOARN) that is coordinated by the World Health Organization (WHO). GOARN is a technical collaboration of existing institutions and networks that pool human and technical resources for the rapid identification, confirmation and response to outbreaks of international importance.

CDC currently operates five GDD Centers – two mature centers in Thailand and Kenya which were built on established FETPs and IEIPs, and three developing centers in Guatemala, China, and Egypt. The mature centers have a full complement of six CDC staff and from 50 to 100 locally employed staff, and have established surveillance and outbreak response activities. The developing Centers are working to achieve these staffing levels and baseline activities. Each Center serves as a regional resource to assist both the host country and also neighboring countries that lack fully developed capacity of their own. Thus, CDC is able to maximize its investment with these individual Centers by also providing broader, regional support.

Locations of the GDD Centers are selected in consultation with invited countries, internal experts, and international partners. Several factors are considered during the selection process, including population density and history of infectious diseases in the

country, commitment of the country in supporting and valuing CDC partnership, and presence of other international agencies and organizations.

GDD Operations Center

The GDD Operations Center, physically located within the Emergency Operations Center at CDC Headquarters in Atlanta, serves as CDC's central analytical clearinghouse and coordination point for international outbreak information gathering and response. Information about outbreaks worldwide is collected from many sources, including GDD Centers, CDC programs, and a wide range of public and private sources, WHO, the U.S. Department of State, U.S. Agency for International Development , Department of Defense, Department of Homeland Security's National Biosurveillance Integration System, Georgetown University's Project Argus, the Global Public Health Information Network, and other governmental and non-governmental organizations. Information is analyzed using the expertise of scientists from across the agency to sort through all of the information received, determine the public health threat posed by a given event, and guide the appropriate level of response.

The current outbreak of Ebola can be used to highlight the role of the GDD Operations Center in coordinating disease detection and response activities. Beginning on August 27, 2007, the GDD Operations Center began closely tracking reports of unexplained death in the Democratic Republic of Congo (DRC). The reports initially included descriptions of multiple symptoms that could be associated with several diseases. GDD Operations Center staff worked with CDC scientists to analyze the sometimes confusing information and reports from the field, collaborated with CDC staff in the DRC to confirm

the situation, determined this was a significant health threat, and alerted WHO, GOARN members, and other staff at CDC headquarters in Atlanta about this situation. CDC also identified and deployed a CDC physician (who had previously worked in the area) to provide an assessment of the situation prior to knowing the Ebola virus etiology and guide the larger response. On September 10, this outbreak was confirmed as Ebola, after specimen testing performed at CDC and in Gabon. GDD Operations Center staff then coordinated the deployment of a response team comprised of nine CDC scientists to assist in the field response. As part of the ongoing response, the GDD Operations Center will continue to work closely with the Ministry of Health, WHO and other GOARN partners to conduct outbreak response activities, deploy CDC staff, and facilitate specimen testing by the appropriate CDC laboratories as needed.

Partners

No single country or institution has all of the capacities to respond to international public health emergencies. The GDD program represents a partnership between CDC, the host country, and participating neighboring countries. CDC also works with a variety of other domestic and international partners, including WHO, the U.S. Department of State, USAID, DOD. For example, the developmental GDD Center in Egypt is co-located with the DOD U.S. Naval Medical Research Unit (NAMRU-3). Thus, the Egypt Center leverages the considerable expertise, resources, and regional contacts of that long-standing DOD medical facility in the Middle East.

Impact of GDD Activities

CDC is currently in the process of implementing a comprehensive monitoring and evaluation framework that can be used to assess the performance and progress of the GDD Centers. During 2006, an initial framework was used to collect information about the progress and achievements of the GDD Centers. Although GDD is still considered to be in the early stages of implementation, data captured (in each of the five GDD key activity areas) from 2006 will provide a baseline from which the impact of the Centers can be assessed over time. Examples of these data include:

- Outbreak Response: During 2006, the GDD Centers collectively responded to more than 144 disease outbreaks, including avian influenza, hemorrhagic fever, meningitis, cholera, and unexplained sudden death. These emergency responses resulted in measurable health impact, such as the disease control efforts that led to an 83% decline (compared to the previous year) in *Streptococcus suis* cases in one region of China, the delivery of botulism antitoxin that likely prevented multiple deaths in Thailand, and the investigation and control measures that saved hundreds of lives from methanol intoxication in Nicaragua.
- Surveillance: The Thailand Center expanded an ongoing, active, pneumonia surveillance system developed by the Thailand IEIP in two provinces by adding advanced microbiology diagnostic capacity. Within 10 months of its implementation, data were available to begin describing the bacterial causes of pneumonia, including the identification of confirmed cases of pneumococcal disease at a rate more than six-fold higher than the previous three years combined. This new capacity produces reliable information that can be used to

identify appropriate public health interventions, including potential use of the pneumococcal vaccine.

- Research: The Kenya Center established capacity for diagnostic testing for more than five pathogens. Because this capacity had previously been unavailable in this region, it has measurably enhanced disease detection and identification of appropriate response interventions.
- Training: In 2006, collectively, the Centers helped to strengthen in-country and regional public health capacity for outbreak detection and response by graduating 27 FETP fellows, and providing short-term training for more than 900 public health staff. In China alone, 20 former FETP graduates now hold key positions in emergency response or infectious disease departments in 14 provinces and at China CDC.
- Networking: The activities and experiences from individual GDD Centers often provide benefits to other Centers in the network and in turn, to other regions of the world. For example, early in the avian influenza epidemic, the Thailand Center in collaboration with CDC's Influenza Division staff developed and hosted rapid response training for pandemic influenza that was attended by staff from the other Centers. The participating countries were then able to provide in-country training to their colleagues and establish a greater regional capacity for avian and pandemic influenza preparedness and response. This curriculum now serves as a template for trainings conducted all over the world.

Global Capacity to Detect and Respond to Avian Influenza

The National Strategy for Pandemic Influenza, which was released in November 2005, serves as the framework for pandemic influenza planning efforts in the US. In support of the National Strategy's goal to "stop, slow, or otherwise limit the spread of a pandemic to the United States," GDD Centers, CDC's Influenza Division, and other CDC programs have been actively working to advance global health capacity in the detection and response of influenza viruses with pandemic potential. CDC's international influenza efforts are focused on: improving and expanding global surveillance networks; increasing virus isolation and epidemiological data collection through expansion of capacity; and increasing timely identification, reporting, and response to outbreaks. Bilaterally and globally through WHO, CDC is providing direct support and technical assistance to over 40 countries and has a much broader reach regionally through WHO regional offices and GDD Centers. A few of CDC's key activities are highlighted below:

- CDC is one of four WHO Collaborating Centers for the Surveillance Epidemiology and Control of Influenza. As such, CDC serves as a global resource and reference center for the WHO Global Influenza Surveillance Network (GISN). This network serves as a global alert mechanism for the emergence of influenza viruses with pandemic potential and the monitoring of seasonal influenza strains circulating around the world. Information from this network is used to make recommendations on which influenza viruses should be included in annual vaccines, identify viruses with pandemic potential, and develop vaccine candidates for use worldwide. Through this system during 2003-2007, CDC received 1,445 suspect avian influenza (H5N1) specimens. Of these, 993 were from humans with 241 positive results; 444 were from animals of

which 261 were positive; and 8 were environmental specimens of which 6 were positive for H5N1.

- CDC staff have conducted numerous training programs in laboratory diagnostics, disease surveillance, field epidemiology, and outbreak response to prepare rapid response teams in Africa, Asia, Central Asia, and Latin America. The training helps to ensure that countries at high risk for avian influenza have the ability to respond quickly and appropriately to pandemic threats and have resulted in the creation of thousands of local responders.
- Since 2003, the CDC has responded to and helped contain many outbreaks (human and animal) of highly pathogenic avian influenza (H5N1) globally. During 2006 alone, the GDD Centers collectively aided in the response and containment of 28 human cases of H5N1. All of these responses were initiated within GDD's target goal of 48 hours and a number of appropriate interventions were implemented– cases were confirmed, contacts were identified, oseltamivir was provided for treatment, and patients were isolated. While some of these cases and small family clusters may have resolved without any intervention, it is also possible that the efficient and effective response by GDD Centers and their partners has had a larger impact by limiting disease transmission. In addition, CDC has contributed to outbreak responses in Laos, Cambodia, Vietnam, South Sudan, Ghana, Nigeria, Djibouti, Indonesia, and Togo through international field staff and Atlanta-based staff.

CDC currently considers avian influenza to be the most urgent threat to human health and will continue to focus efforts on increasing global health capacity to detect and respond to this virus. While it is important to recognize that countries affected by H5N1 in Asia, Africa, and the Middle East have made effective use of funds administered by HHS/CDC and progress in disease detection and response over the past two years, sustained capacity development requires longer term efforts. These countries are going beyond detection and response and are developing capacity for seasonal and avian influenza monitoring, establishing routine use of modern epidemiologic and diagnostic tools to identify and characterize novel influenza strains including other potential pandemic viruses. Most of these countries have established rapid response teams for investigating cases, and some are developing domestic capacity to manufacture seasonal and pandemic influenza vaccines.

Zoonotic Disease Capacity

Approximately 75% of recently identified emerging infectious diseases affecting humans are diseases of animal origin, including many of the major recent threats to the health and safety of American citizens. Additionally 80% of pathogens with a high potential for bioterrorism are zoonotic. For this reason, CDC has a National Center that works with a wide range of partners in both human and animal health to develop surveillance and response systems focused specifically on the human-animal interface that can greatly improve our ability to detect important zoonotic diseases in both wild and domestic animals at a much earlier stage, thereby potentially disrupting disease transmission and reducing the impact on human health. In addition, CDC recognizes the importance and need to work collaboratively, not just across the traditional public health community, but

also with agricultural, wildlife, and companion animal agencies and organizations. In particular, CDC is a World Organization for Animal Health (Office International des Epizooties, OIE) Collaborating Centre for Emerging and Reemerging Zoonoses. In this role, CDC will be better equipped to forge stronger ties between the public health and animal health sectors.

Other CDC Global Health Programs

In addition to the GDD program, CDC manages many other global health programs that collectively contribute significantly to overseas capacity in detecting and responding to a variety of diseases and emerging health issues. These programs include:

Integrated Disease Surveillance and Response (IDSR) -- CDC provides technical expertise to the WHO African Regional Office (WHO AFRO) and African Ministries of Health to implement this system (in 46 countries) which aims to improve the availability and use of surveillance and laboratory data to allow for timely and targeted public health interventions, preventing illness and death from diseases for which there are known interventions, without which inadequate capacity precludes early identification of and response to outbreaks. The IDSR infrastructure is serving as the mechanism through which the International Health Regulations (2005) as well as preparedness for pandemic influenza will be implemented in the African region.

Global AIDS Program -- CDC's Global AIDS Program is a partner in the unified U.S. Government effort to implement the President's Emergency Plan for AIDS Relief. GAP provides technical and programmatic expertise in strategic information, including

surveillance, epidemiology, evaluation, research and health informatics to strengthen technical capacity of Ministries of Health in Africa, Asia, Latin America and the Caribbean to address the HIV/AIDS epidemic as well as the local public health workforce in resource-poor nations, and has built long-lasting public health partnerships with host country governments, global health partners, and multilateral organizations such as the Joint United Nations Programme on HIV/AIDS (UNAIDS) and the World Health Organization (WHO). GAP supports the administration of large scale national population-based surveys and AIDS indicator surveys to assess HIV prevalence and other diseases such as syphilis and hepatitis which have impact on HIV populations. Sentinel surveillance systems are also in place to detect HIV prevalence and behaviors in high risk populations. Finally, GAP supports the development of national reporting systems and IT infrastructure needed for surveillance monitoring, reporting and analysis. In addition, because of the large number of CDC/GAP staff working in country offices and regional offices, they sometimes serve as initial responders to emergencies in-country involving other health issues. This provides initial response capacity while awaiting the arrival of a more specialized, technical team.

Malaria -- In support of the President's Malaria Initiative (PMI), CDC works alongside USAID and other partners in 15 focus countries to help National Malaria Control Programs implement proven malaria control interventions such as indoor spraying, insecticide treated nets, treatment with effective antimalarial drugs, and prevention in pregnancy to reduce the burden of this disease. CDC also provides assistance to host governments in PMI countries to strengthen their assessment of population coverage of

these key interventions and their impact on malaria related morbidity (anemia, infection rates) and mortality through large scale national level surveys.

Tuberculosis – GDD resources have enabled the enhanced screening for tuberculosis and drug-resistant tuberculosis in approximately 140,000 refugees residing in Thailand and scheduled for resettlement in the United States. The enhanced screening relies on improvements in laboratory capacity to culture Mycobacterium tuberculosis and conduct real-time drug-susceptibility testing to guide the appropriate treatment of refugees with tuberculosis before resettlement in the U.S. This approach will demonstrate the feasibility and benefits of a model for enhanced screening for disease detection and overseas treatment to prevent the importation of airborne infectious diseases. To accomplish this complex mission, CDC is networking with Department of State, the Thai Ministry of health, the International Office of Migration, and Doctors Without Borders (Medicins Sans Frontieres).

Food Safety and Food-borne Diseases -- CDC's PulseNet was established domestically as a national network for molecular sub-typing of foodborne pathogens, used in the surveillance and investigation of foodborne illness outbreaks. CDC has collaborated with the Food and Drug Administration, the Food Safety and Inspection Service, and internationally to establish PulseNet networks in WHO regions for the comparison of samples and other collaborations. Under the auspices of WHO's collaborating center for Salmonella Surveillance, CDC coordinates the activities of SalmSurv, a global network of more than 900 scientists representing 150 countries involved in foodborne surveillance and outbreak detection and response. This network promotes integrated,

laboratory-based surveillance to foster intersectoral collaboration among human health, veterinary, and food-related disciplines.

Arboviruses and Other Vector-Borne Infectious Diseases -- CDC is a WHO Collaborating Center on dengue, plague, and other vector-borne diseases, and it provides laboratory and epidemiological support to developing countries. For example, CDC specifically works with the Pan American Health Organization to strengthen surveillance and laboratory diagnostic capacities in Latin America and the Caribbean for West Nile Virus and Venezuelan Equine Encephalitis.

Encephalitis and Other Diseases -- CDC conducts encephalitis surveillance, prevention, and control activities in India, China, and Bangladesh, including for Japanese encephalitis, an important cause of illness and death in Asian children. CDC collaborates with Vietnam, China and other countries in identifying and characterizing previously unknown mosquito borne viruses of humans.

Polio, Measles, and Other Vaccine Preventable Diseases -- The surveillance of acute flaccid paralysis (AFP) is a central strategy for achieving polio eradication. The AFP surveillance network includes 145 local and regional reference laboratories and more than 3,200 surveillance medical officers in 54 countries. This surveillance system and laboratory network exemplifies how global surveillance investments have been leveraged to build an integrated system that can detect a number of other diseases. For instance, one of the first places to identify the SARS coronavirus was a Global Polio Network laboratory in China. The SARS coronavirus was also identified and first

sequenced at CDC, largely by scientists, laboratory capacity, and advanced technology developed for sequencing polioviruses.

The AFP surveillance network is closely tied to the measles/rubella surveillance network, which consists of 690 labs at the national, regional and global levels. Many of these institutions house polio and measles/rubella laboratories together.

Through CDC's work with Accelerated Development and Introduction Plans (ADIPs), project efforts are underway to extend the availability and use of vaccines that prevent diseases to developing countries. Rotavirus, pneumococcal disease, and *Haemophilus Influenzae* type b (Hib) ADIP projects enhance the overall global epidemiologic and laboratory surveillance capacity and infrastructure in the countries and regions in which they focus

Closing

CDC's GDD program and other global health efforts have contributed significantly to building capacity of other countries to detect and respond to emerging diseases, including avian influenza. CDC looks forward to continued collaboration with HHS, USAID, DOD, WHO, and other federal and international partners to implement additional activities that will further enhance this capacity.

CDC greatly appreciates the Subcommittee's interest in these important issues. Thank you for the opportunity to share this information with you. I will be happy to answer any questions.

STATEMENT FOR THE RECORD

KIMOTHY SMITH, DVM, PhD

ACTING DIRECTOR, THE NATIONAL BIOSURVEILLANCE INTEGRATION CENTER
CHIEF SCIENTIST, OFFICE OF HEALTH AFFAIRS
UNITED STATES DEPARTMENT OF HOMELAND SECURITY

BEFORE THE

UNITED STATES SENATE
HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS COMMITTEE

SUBCOMMITTEE ON OVERSIGHT OF GOVERNMENT MANAGEMENT, THE FEDERAL WORKFORCE, AND THE DISTRICT OF COLUMBIA

"FORESTALLING THE COMING PANDEMIC: INFECTIOUS DISEASE SURVEILLANCE OVERSEAS"

OCTOBER 4, 2007

Mr. Chairman, Ranking Member Voinovich, and Members of the subcommittee, I am Dr. Kimothy Smith, Acting Director of the National Biosurveillance Integration Center and Chief Scientist in the Office of Health Affairs at the Department of Homeland Security (DHS). Before I begin, I would like to thank you for the opportunity to testify before the subcommittee on this critical issue of global disease surveillance and your continued willingness to work with the Department in providing leadership and commitment to ensure the security of our Nation. I would also like to thank our Federal partners, including those on the panel today, and others that support and interact with us as we work everyday to fulfill our mission.

As you may know, the Office of Health Affairs, within DHS, is leading the National Biosurveillance Integration Center, or NBIC, partnership. Establishing NBIC has been, and continues to be, a top priority for Secretary Chertoff. NBIC brings together biological information from various Federal partners and open sources to develop an integrated picture of biological risks. The President has called for a "timely response to mitigate the consequences of a biological weapons attack." Our mission was initially established through Homeland Security Presidential Directives (HSPDs) 9 and 10. It was also recently codified in title XI of P.L. 110-53, *Implementing Recommendations of the 9/11 Commission Act of 2007.*

NBIC seeks to provide information to allow early recognition of biological events of national concern, both natural and man-made, to make a timely response possible. No other place in government serves to integrate this information from across the spectrum of public and private, domestic and international, open or protected sources. The three vital component parts of NBIC are:

- A robust information management system capable of handling large quantities of structured and unstructured information;
- A corps of highly-trained subject matter experts and analysts; and
- A clear establishment of a culture of cooperation, trust and mutual support across the Federal government and other partners.

NBIC has agreements with a number of Federal partners and other relevant entities. Many of these agreements have been formalized through MOUs, while others are still being developed. Specifically, we have MOUs with Departments of the Interior, State, Agriculture, Defense, Health and Human Services and Transportation, as well as working closely with our DHS components. We also have formal outreach with the Department of Veterans' Affairs, FBI, U.S. Postal Service, Environmental Protection Agency and the National Oceanic and Atmospheric Administration. Additionally, we are developing relationships with State Intelligence Fusion Centers and with outside entities such as Georgetown University's ARGUS Project – who are represented here today. As we have learned throughout this process, each agency and organization is quite unique and there are many forms and types of information out there to identify, capture, analyze and integrate into a common picture. To succeed, we must leverage all possible information sources within their limits. The key to the success of NBIC is the trusted relationships among Federal partners and others who provide access to the valuable information necessary to meet the needs of decision-makers.

A system of this complex nature, however, is not fully functional without the subject matter expertise and analysis. Thus, subject matter experts from the various agencies and organizations

must also be leveraged to examine information, provide informed interpretation, and accomplish consultations, when necessary, to meet the needs of the appropriate decision makers.

To provide additional value to our partners, DHS has the advantage of its access to threat information, which, when integrated with surveillance of health data and disease outbreak trends may provide early warning of a biological attack. To accomplish this, fused information products and other patterns and trends developed from biosurveillance sources are provided to our agency partner, the DHS Office of Intelligence and Analysis, for incorporation with intelligence analysis products. When appropriate, the product can be forwarded to the wider Intelligence Community and pertinent threat analysis information added for return to the Center for further interagency dissemination. This final process of actionable information preparation fuses biosurveillance patterns and trends with threat information. The completed products can then be provided to the National Operations Center (NOC) for inclusion in the Common Operating Picture (COP). This distribution closes the loop by providing biosurveillance situational awareness back to NBIC partner agencies and other organizations.

By integrating and fusing this large amount of available information we can then begin to develop a base-line against which we can recognize anomalies and changes of significance. NBIC seeks to identify patterns and trends, which in combination with threat analysis provide the situational awareness our partners need to execute their mission.

The NBIC is operating today, providing analysis and developing biosurveillance assessments, while responding with our Federal partners to real-world events. However, it should be noted

that it is not at Full Operational Capability (FOC). The projected date for full NBIC operations is September 2008. The Center currently operates a 24 hour/7 days a week National Biosurveillance Watch Desk, within the National Operations Center (NOC), which first stood up in December 2005. Over the last few months, we have transitioned to having U.S. Public Health Service officers posted at our Watch Desk, a change that provides a needed, initial "eyes-on" assessment of incoming information to determine potential importance to health security and the need for further analysis. Facilities have been acquired and personnel requirements have been finalized with two-thirds of those requirements filled to date. Interagency Agreements and Memorandums of Agreement (MOAs) have also been developed for the integration of subject matter experts (SMEs) from the Centers for Disease Control and Prevention (CDC) and the Armed Forces Military Intelligence Center (AFMIC).

We have also recently introduced our National Biosurveillance Integration System Operational Display System (NODS), an IT system that provides our Center the visibility into over 300-plus unclassified sources of biosurveillance information from across multiple sources. This information is aggregated with various reports that we receive from the departments of Defense, State, Health and Human Services, Agriculture, and Transportation and other sources. Our relationship and integration of such valuable sources, such as ARGUS is firmly established within NODS.

Currently, the acquisition process of our biosurveillance program is based on monitoring sources of biological information used to develop information products for dissemination to decision makers and key stakeholders. Some of these sources include: ARGUS, the Office International

des Epizooties (OIE -The World Organization for Animal Health), and the World Health Organization (WHO), among others. Our system collects and stores information, permitting easy querying via web-based interface. Our early experience has shown that much of this information is not neatly packaged, but comes mostly unstructured, sometimes as simple "e-mail" message traffic or reports in multiple formats. As we become aware of new, useful information streams, we will assess their value and will incorporate them as appropriate.

We are expanding NODS capabilities to automate the development and dissemination of reports. Our NBIC reports, to be distributed through the NOC-COP fall into three categories: real-time notifications, daily and weekly reports and situational reports. Notifications are short, factual summaries developed immediately following significant or newsworthy "bio-events." Daily and weekly reports, highlight events of potential significance. Situation reports provide daily updates of ongoing domestic or international "bio-events." Additionally, we have instituted a Pilot Biosurveillance Common Operating Picture (BCOP) that incorporates weekly Avian Influenza updates.

One important function of NBIC will be the integration of wildlife biosurveillance information as a potential key early indicator of a possible disease outbreak. The U.S. Fish and Wildlife Service, USDA and the U.S. Geological Survey, along with information networks such as the Global Avian Influenza Network for Surveillance (GAINS), that receives support from my colleagues at USAID and CDC and the International Species Information System/Zoological Information Management System (ISIS/ZIMS) community all provide data that may prove useful as a "very early" indicator of a significant bio-event.. To this end, we have clear interest

in supporting the ISIS/ZIMS efforts as well as deepening our relationship with our GAINS colleagues for enhanced information sharing beneficial to the broader biosurveillance community. NBIC's ability to fuse data gathered from across Federal agencies and others will assist in public health risk determinations in the event sick animals are detected in wildlife. As an example, sampling of birds for the H5N1 virus is useful to support the Nation's effort against pandemic influenza.

Mr. Chairman, and members of the subcommittee, there are numerous challenges before us to develop an effective biosurveillance capability, which require a tremendous amount of continued partnership, dialogue and development of system capacity. However, the consequences of not developing this capability could be devastating. While continuing to move forward to meet our initial goals, we are cognizant of maintaining a realistic assessment of the biosurveillance mission to assure success. There are no perfect data sets available at the present time that gives a picture of all bio-events.

Even as we work toward the acquisition and automation of the myriad information streams, the heart and soul of our program continues to be people representing our various partners and NBIC staff. Retention of existing staff and completing interagency agreements for additional subject-matter experts and analysts are essential to accomplishing the mission.

The scope and quality of our reporting continues to be our emphasis and our daily challenge in an effort to serve our customers. Facilitating distribution of the information products will be in place when NBIS 2.0 is launched providing web-based, security level specific access. Data from

multiple domains, bringing it together and providing substantive analysis is complex and difficult. Additionally, there are the challenges of privacy and propriety of information, information-sharing protocols, and system security.

At DHS, we continue to work on obtaining the needed systems, information and subject matter expertise to meet this critical mission of biosurveillance; one that remains a top-priority of Secretary Chertoff. Our job is to ensure that the nation has the capability for comprehensive, integrated biosurveillance situational awareness, early-warning of a possible attack and a decision support system for outbreak and event response in the event of a biological incident, whether intentional or naturally occurring. With your continued support, as well as our interagency and organizational partners, we can achieve this critical mission. Thank you for your time and continued leadership on these critical issues. I look forward to answering your questions.

UNCLASSIFIED

FINAL VERSION

STATEMENT BY

COLONEL RALPH L. ERICKSON MD, DrPH
DIRECTOR, DoD EMERGING INFECTIOUS DISEASE SURVEILLANCE AND RESPONSE SYSTEM (DoD-GEIS)

COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS

SUBCOMMITTEE ON OVERSIGHT OF GOVERNMENT MANAGEMENT, THE FEDERAL WORKFORCE, AND THE DISTRICT OF COLUMBIA

UNITED STATES SENATE

FIRST SESSION, 110TH CONGRESS

FORESTALLING THE COMING PANDEMIC: INFECTIOUS DISEASE SURVEILLANCE OVERSEAS

OCTOBER 4, 2007

NOT FOR PUBLICATION
UNTIL RELEASED BY THE
COMMITTEE ON HOMELAND SECURITY
AND GOVERNMENTAL AFFAIRS

Mr. Chairman and members of this distinguished Subcommittee, thank you for inviting me to discuss our Department of Defense international surveillance efforts for emerging infectious diseases overseas. I am Colonel Ralph Loren Erickson, Director of the Department of Defense Global Emerging Infections Surveillance and Response System, a program which is abbreviated as "DoD-GEIS". I'm a physician in the U.S. Army with 26 years of active duty service. A graduate of the Uniformed Services University of the Health Sciences School of Medicine, I also hold a Masters of Public Health degree from Harvard and a Doctorate of Public Health from Johns Hopkins.

OVERVIEW OF DoD-GEIS

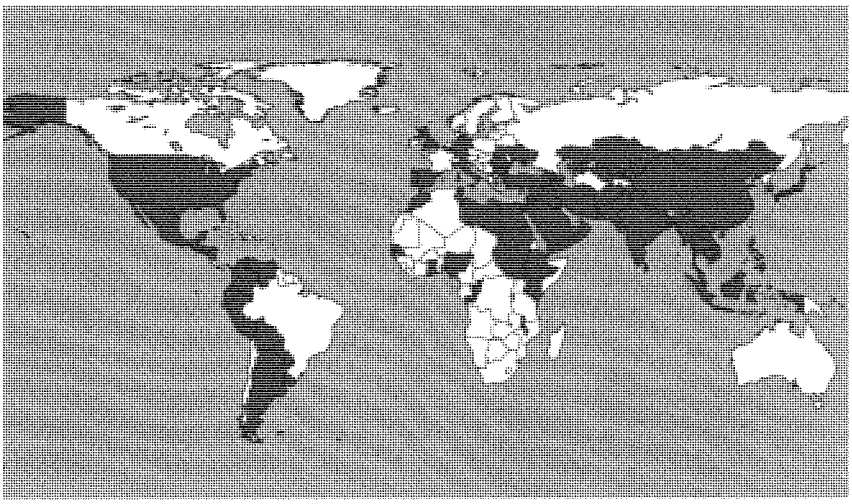
The DoD-GEIS was created in 1996 by a Presidential Decision Directive NTSC-7 that expanded the role of the DoD to address threats to our nation and others posed by emerging and re-emerging infectious diseases (EID). The Institute of Medicine (IOM) of the National Academy of Sciences, in a review of DoD-GEIS in 2001, described it as "a critical and unique resource of the United States in the context of global affairs. It is the only U.S. entity that is devoted to infectious diseases globally and that has broad-based laboratory capacities in overseas settings." A National Intelligence Estimate at that time pointed out that EIDs are a global security issue; they have the capacity to harm US interests abroad through destabilizing key institutions, obstructing trade and human migration, slowing or reversing economic growth, fomenting social unrest, complicating our response to refugee situations by increasing the demand for

humanitarian intervention, and through their potential association with biological terrorism and warfare. The validity of this estimate has been supported by the swift appearance of Severe Acute Respiratory Syndrome and highly pathogenic avian influenza in recent years.

The framework of DoD-GEIS consists of four goals, of which the first, surveillance and detection, is the primary area of concentration. The three other goals are: response and readiness, integration and innovation, and cooperation and capacity building. Each goal encompasses five priority surveillance conditions: (1) respiratory diseases, especially influenza; (2) gastroenteritis syndromes; (3) febrile illnesses (especially malaria and dengue); (4) antimicrobial resistance; and (5) sexually transmissible infections. Anchored by five robust overseas laboratories in Bangkok, Jakarta, Nairobi, Cairo and Lima the DoD-GEIS team operated in 77 different countries worldwide in FY06 and FY07.

Countries in which DoD GEIS-funded activities operate: FY06 and FY07 (n=77)

Afghanistan	Ecuador	Kazakhstan	Nicaragua	Sudan
Argentina	Egypt	Kenya	Nigeria	Syria
Armenia	El Salvador	Korea	Oman	Thailand
Azerbaijan	Ethiopia	Kuwait	Pakistan	Tunisia
Bahrain	Germany	Kyrgyzstan	Palestine	Turkey
Bangladesh	Ghana	Lao PDR	Paraguay	Ukraine
Belgium	Guam	Lebanon	Peru	United Kingdom
Bolivia	Guatemala	Libya	Philippines	Unites States
Bulgaria	Honduras	Macedonia	Portugal	Uruguay
Burma	India	Malawi	Qatar	Uzbekistan
Cambodia	Indonesia	Malaysia	Republic of Georgia	Venezuela
China	Iraq	Maldives	Romania	Vietnam
Colombia	Iran	Mexico	Saudi Arabia	Yemen
Comoros	Italy	Mongolia	Senegal	
Congo	Japan	Morocco	Spain	
Djibouti	Jordan	Nepal	Sri Lanka	



ONGOING DoD-GEIS ACTIVITIES

DoD-GEIS supports host country and U.S. efforts to develop disease surveillance and early warning mechanisms through laboratory capacity building, training, and technical partnerships to implement and operate surveillance systems worldwide. Efforts to improve outbreak detection timeliness and situational awareness include systems like EWORS and Alerta, which apply computer and information technology in resource-limited settings. EWORS is a hospital-based syndromic surveillance system that uses internet reporting from sentinel sites and automated detection algorithms at system hubs to detect and monitor infectious disease outbreaks and support decision-making by local and national health authorities. EWORS is operating in Indonesia and Laos (and in a different form in Peru). Possibly one of the most significant EWORS accomplishments is the official adoption of this system, earlier this year, by the

government of Indonesia. The government will require central hospitals to implement EWORS in order to receive national accreditation. The Navy NAMRU-2 laboratory in Jakarta will provide technical support and trainer training, but the government of Indonesia plans to provide the other resources necessary to implement this plan.

Alerta is a system operated by the Peruvian Navy and Army in collaboration with the Navy NMRCD lab in Lima. It uses commercial software (by Voxiva) to enable reporting from sentinel sites (Navy: 86 reporting units; Army: 116 reporting units), to include remote locations in the Amazon, using cell phones, radio, and internet. Like EWORS, Alerta algorithms are run at the system hub to identify outbreaks. Alerta has detected and facilitated the investigation and response to more than 30 disease outbreaks in Peru. These included: influenza, dengue, malaria, and diarrhea. NMRCD has trained ~900 local nationals through over 100 (2-day) training sessions to operate Alerta. Alerta expansion to other countries in Central and South America is under discussion with SOUTHCOM and CDC-CAP. There are also plans to implement Alerta in Cameroon in FY08.

The list of accomplishments for the last two years goes on. In Jakarta, the Navy's NAMRU-2 lab supported the Ministry of Health response to an outbreak of dengue hemorrhagic fever. The GEIS-NASA Rift Valley Fever (RVF) risk prediction project served warning of an RVF epidemic in East Africa in September 2006, two months before the outbreak began; the Army's USAMRU-K lab deployed a small entomology team to collect specimens in the affected area

before the first cases were reported. The Navy's NAMRU-3 lab in Cairo responded to influenza outbreaks in Iraq and Afghanistan, areas where WHO had little capability; NAMRU-3 has become the WHO influenza regional reference laboratory for the Eastern Mediterranean region and is working in many countries in the Middle East and Central Asia. The Army AFRIMS lab in Bangkok partnered with the Royal Thai Army and Ministry of Public Health to strengthen both military and civilian public health systems in remote areas. The AFRIMS satellite laboratory in Nepal has recently detected (in 2005-2007) and provided advance notice of influenza virus genetic changes that later emerged globally, allowing for better vaccine strain selection worldwide. The Army USAMRU-K lab in Nairobi initiated influenza surveillance in FY06 making it one of very few labs providing reliable data from sub-Saharan Africa. In all, DoD-GEIS partners are currently collecting influenza isolates at 273 distinct sites in 56 different countries. In FY08, the GEIS network has plans to extend lab-based influenza surveillance to the countries of Cameroon and Uganda. In both of these countries the intent is to establish surveillance in both human (seasonal influenza) and migratory wild bird populations. Discussions are also underway to work in Nigeria in either FY08 or FY09.

DoD-GEIS partners made important contributions to surveillance of malaria in FY06 and FY07. An international Malaria Diagnostic Center of Excellence was established in Kisumu, Kenya, by the Walter Reed Army Institute of Research in collaboration with USAMRU-K and the Kenya Medical Research Institute to improve microscopy accuracy in surveillance, research, and clinical

programs. This program has trained over 200 microscopists from 11 countries, achieving significant improvements in performance. All of the Overseas Laboratories continue to monitor antimalarial drug resistance, supplementing Ministry of Health and WHO efforts with sophisticated laboratory methods. Mosquito collections by 18th MEDCOM in Korea, linked with molecular analysis and modeling at the Walter Reed Biosystematics Unit, has precisely identified the species involved in malaria transmission and the reemergence of malaria in the vicinity of the Demilitarized Zone.

COORDINATION OF DoD-GEIS ACTIVITIES WITH OTHER FEDERAL AGENCIES

DoD-GEIS works closely with other Federal agencies who are also engaged in the surveillance of infectious diseases. This collaboration takes many forms and occurs both within the United States and overseas. The DoD and other U.S. Government agencies (e.g. DHHS, DHS, DOS, and CDC) have exchanged fulltime liaison officers to help provide situational awareness of ongoing missions and implement initiatives of mutual interest. Additionally, GEIS staff members regularly attend other agency meetings. One standing meeting of note is the CDC-DoD Working Group which through the last twenty months (since Jan 2006) has met both in-person and via teleconference several times to share information about our current surveillance activities overseas along with projected plans for the future.

In those countries where DoD has laboratories (Thailand, Indonesia, Peru, Kenya and Egypt), each laboratory commander participates with the American Embassy country team and thus works closely with representatives from other

agencies performing similar work (e.g. HHS, CDC, USAID). DoD-GEIS also has considerable ongoing professional contact with senior scientists and program managers from other Federal agencies through its regular participation with and membership in major organizations such as Institute of Medicine / National Academy of Science (Microbial Threat Forum), U.S. Medicine Institute (round table policy meetings), and the Infectious Diseases Society of America. To enhance the integration of DoD-GEIS surveillance efforts on a global level, we have a fulltime military medical officer assigned to the World Health Organization in Geneva, Switzerland.

COOPERATION WITH THE GLOBAL VETERINARY COMMUNITY IN DETECTING EMERGING ZOONOTIC DISEASE

The DoD-GEIS network is replete with talented physicians, veterinarians, entomologists and laboratory professionals drawn from all three of the Armed Services where the culture of One-Health / One-Medicine is already well established.

The Navy's NMRCD lab in Lima is actively working with veterinarians from San Marcos University and the Global Avian Influenza Network for Surveillance (a project developed by the Wildlife Conservation Society and funded by USAID, WHO and UN Food and Agriculture Organization) to coordinate wild bird surveillance efforts in Peru. This surveillance project began in early 2007. To-date, three different influenza subtypes (not previously seen in Peru) have been identified among migratory birds (H4, H7, & H10). The NMRCD is also actively training veterinarians and epidemiologists at Cayetano Heredia University, San

Marcos University, and the Instituto Nacional de Salud to improve the Government of Peru's capacity to monitor avian influenza viruses in wild birds.

Since 2003, the Navy's NAMRU-3 lab in Cairo, has worked collectively with the Army's USAMRU–K lab in Nairobi, the National Museums of Kenya ornithology department, the Kenya Medical Research Institute, the Ministry of Environment of Egypt; and the CDC International Emerging Infections Program to collect wild bird surveillance samples to detect circulating strains of avian influenza virus. The Global Disease Detection (GDD) program of the Centers for Disease Control and Prevention (CDC) will soon be integrated into the operations of the NAMRU-3 lab. The NAMRU-3 has collaborated closely with CDC's Kenya field staff in investigating several outbreaks of human disease (e.g. Rift Valley Fever). The NAMRU-3 lab was the first to detect, diagnose and confirm highly pathogenic avian influenza (HPAI) H5N1 in poultry in Afghanistan, Djibouti, Egypt, Iraq, Jordan, and Kazakhstan. As a result of NAMRU-3's surveillance efforts in Ukraine and Ghana, they were also able to confirm the existence of two separate H5N1 HPAI outbreaks among migratory birds and poultry in February 2006 and April 2007, respectively.

As of June 2007, the Army AFRIMS lab in Bangkok has started conducting influenza surveillance of domestic animals (both birds and mammals) that are located near human cases of H5N1 infection in Khamphaeng Phet province, northwest Thailand. The AFRIMS Veterinary BSL-3 laboratory serves as a unique regional asset to study a myriad of zoonotic illnesses and not just

avian influenza. Wildlife and domestic poultry influenza surveillance through the Nepalese Central Veterinary Laboratory is also planned.

The Navy's NAMRU-2 lab in Jakarta presently collaborates with the University of Iowa, Center for Emerging Infectious Diseases (CEID) in conducting avian influenza surveillance. This involves sampling of domestic poultry and waterfowl, wild resident and migratory birds on five Java island sites with over 5,000 samples collected annually. H5N1 screening of >700 samples have identified 8 positive samples (1% positivity rate).

CONCLUSION

The DoD-GEIS is currently a robust, well-developed, international surveillance and response system whose mission is health surveillance through monitoring infectious disease outbreaks using syndromic as well as diagnostic methodologies. DoD-GEIS programs continued to identify and address critical gaps in emerging infectious disease preparedness. DoD-GEIS accomplishments and capabilities have identified it as an important contributor to force health protection for U.S. military forces and an important partner in the global effort to identify and control emerging infectious diseases.

DR. KENT R. HILL
ASSISTANT ADMINISTRATOR FOR GLOBAL HEALTH
U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

BEFORE THE
SUBCOMMITTEE ON OVERSIGHT OF GOVERNMENT MANAGEMENT, THE FEDERAL WORKFORCE, AND THE DISTRICT OF COLUMBIA
COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS
UNITED STATES SENATE
OCTOBER 4, 2007

USAID appreciates the opportunity to discuss the critical issue of infectious disease surveillance and USAID's global efforts to strengthen the ability of countries to detect and respond to infectious diseases.

Research has consistently identified a powerful link between investments in improving health status and a nation's economic, social, and political development; I personally have seen the impact of health advancements, many of which are due, in large part, to the generous support of the American people.

My comments begin by discussing the broader topic of infectious disease surveillance and USAID's activities in this area, and then focus more specifically on the topic of emerging zoonotic diseases. My comments reflect the work and vision of USAID's programs in these areas, which are summarized here:

- First, our programs strengthen surveillance systems by building developing country capacity to detect newly emerging diseases.

- Second, our programs focus on fully implementing both arms of the surveillance loop, that is, early detection and rapid and effective response.

- Third, recognizing the increased threat of diseases of animal origin, our programs are fostering critical links between human and veterinary public health.

- And finally, interagency collaboration is a vital element in our efforts to address the issues we are discussing today.

Undoubtedly, diseases are not only significant public health threats – they also jeopardize international commerce, development, and security. It has been estimated that SARS cost the global economy between $30 - $100 billion.[1] The influenza pandemic of 1918 killed between 50 - 100 million people. A similar pandemic today would kill many millions and devastate the global economy for years to come. The social and economic disruptions caused by outbreaks of this magnitude are capable of destabilizing governments and contributing to the increased threat of international terrorism.

One important realization of the public health community is that the security of any country depends on the ability of all countries to maintain an effective public health infrastructure. This includes the ability to detect rapidly disease outbreaks as well as the ability to respond to those outbreaks in a timely and effective manner. In this way it is in the national interest of the United States to support capacity-building activities in developing countries in order to strengthen their ability to control infectious diseases before they spread globally.

This call for support to capacity-building activities is emphasized by the International Health Regulations, which urge all member states to build, strengthen, and maintain the systems needed to detect, track, and report on any disease that is considered a "public health emergency of international concern." USAID is in a critical position, through our disease control programs and our surveillance assistance, to help countries develop these capacities.

USAID has taken on this challenge through several of our programs targeting health system surveillance capacity. The GAO report being released today captures some of our central efforts in surveillance system capacity building, such as our support for Field Epidemiology Training Programs (FETPs) and Integrated Disease Surveillance and Response (IDSR). In addition to the areas mentioned in the report, USAID's disease

[1] Sadique MZ, Edmunds WJ, Smith RD, Meerding WJ, de Zwart O, Brug J, et al., Precautionary behavior in response to perceived threat of pandemic influenza. Emerg Infect Dis [serial on the Internet]. 2007 Sep [9/26/07]. Available from http://www.cdc.gov/EID/content/13/9/1307.htm

control programs are also making important contributions to building surveillance capacity. A few examples of this work include:

Polio

Since 1985, USAID has spent approximately $290 million for polio surveillance in over 40 countries in Africa, South Asia, the Near East, and Newly Independent States (former USSR). These funds have created a global network of 148 national and regional laboratories capable of isolating, serotyping, and in many cases, genetic sequencing of polio viruses. The robust surveillance systems created for polio have been used to support identification of other outbreaks, for example, meningitis in Ethiopia and yellow fever in Liberia.

Tuberculosis

In the area of Tuberculosis (TB), USAID has made significant investments in computerized electronic TB registries, global TB monitoring and surveillance, multi-drug resistant TB surveillance, and TB monitoring and evaluation. In over 200 countries, this global surveillance program is building local multi-disease capacity to collect data and use it effectively to manage patients and programs.

Malaria

The goal of President's Malaria Initiative (PMI) is to reduce malaria-related mortality by 50% by reaching 85% coverage of the most vulnerable populations (pregnant women and children under five) with proven malaria prevention and control interventions in 15 sub-Saharan African countries: insecticide-treated bednets (LLINs); indoor residual spraying with insecticides (IRS); intermittent preventive treatment for pregnant women (IPTp); and prompt treatment of malaria with artemisinin-based combination therapy (ACTs). The PMI is an interagency initiative led by USAID with HHS/CDC as a key implementing partner.

Surveillance of malaria is an essential part of this initiative including establishing and/or supporting national sentinel surveillance sites to collect information on malaria-associated morbidity and mortality and for entomological and epidemiological monitoring. Sentinel sites are typically located in both malaria endemic and epidemic areas. PMI is supporting

health worker training in malaria diagnostics and case management to improve the quality of reporting from these sites.

PMI focus country malaria operational plans also support epidemic surveillance and response, building on national malaria control program strategies. The need for early detection and rapid response requires strengthened health information systems at district level and resources to ensure the availability of additional malaria treatments and insecticides for household spraying in the event of an epidemic.

In a few PMI countries, pilot efforts are underway to explore the feasibility of community-level surveillance systems to track and report on morbidity and mortality at the household level in catchment areas.

In the first 18 months, the PMI reached about 10 million people with lifesaving prevention or treatment services in the existing seven focus countries. The remaining eight focus countries are scheduled to begin activities in FY08. The PMI obligated $30 million in FY06 and $135 million in FY07 in the focus countries.

Avian Influenza

Initially funded in 2005 through supplemental appropriations, to date, USAID has programmed approximately $345 million to limit the spread of avian influenza and prepare for a possible pandemic. USAID works with its partners to improve disease surveillance and diagnostic capacity for rapid detection of AI in animals and humans in affected countries. In Indonesia, where AI is endemic in poultry, USAID supports a community-based surveillance approach, and has mobilized participatory disease surveillance and response (PDS/R) teams in 188 districts across Java, Bali, Kalimantan, Sulawesi, and Sumatra that routinely visit villages and collect essential surveillance data and samples for laboratory analysis. In total, 2,438 Indonesians currently work in the field in 598 surveillance teams, 593 response teams, and 28 combined surveillance/response teams. USAID also works with the Wildlife Conservation Society through the Global Avian Influenza Network for Surveillance (GAINS) to increase surveillance of wild migratory birds and track the movement of AI globally. GAINS contributors work in 28 countries around the world, conducting mortality surveillance, AI sampling, and wild bird censuses. Through GAINS, more than 10,000 samples have been collected for H5N1 analysis and census data

from nearly 103 million bird observations has been made available via an open database and mapping system. During its first year, the GAINS program also trained more than 800 people in wild bird handling, sampling, and/or data collection related to controlling the spread of the H5N1 virus.

These surveillance activities have substantially increased the availability of scientific information about the H5N1 virus, including whether genetic changes have occurred that could increase its threat to humans. This information is also being used in early-warning systems, which help notify at-risk countries about the movement of AI and the nature of the risk they face. For example, GAINS releases confirmation of high pathogenic AI-positive test results within 24 hours so alerts can be disseminated.

While the primary focus of our disease-specific programs is to control the diseases contributing to the majority of mortality worldwide, the activities carried out with these resources are designed to also create long-term surveillance capacity to deal with other infectious diseases, including those of animal origin. For example, USAID has provided technical assistance to national avian and pandemic influenza preparedness task forces in 57 countries to build planning capacity within governments that will allow those countries to efficiently respond to an outbreak of any infectious disease.

Finally, USAID communications programs are working to support mass media campaigns and targeted outreach to generate awareness about the threat of infectious diseases such as avian influenza. These campaigns can be applied to similar disease prevention and food safety issues. For example, simple messages, like those emphasizing proper hand washing after handling poultry and proper farm cleaning and caging practices transcend avian influenza prevention and reinforce messages regarding the prevention of other zoonotic and food-borne illnesses.

Since these disease-specific programs are implemented by many partners within the US Government and the private sector, collaboration is a critical element to our success. Therefore, I would like to mention a few examples of how USAID is collaborating to build better surveillance capacity.

- In collaboration with HHS/CDC, USAID's Global Health Bureau has provided substantial support to the training of field epidemiologists through Field Epidemiology Training Programs

(FETP). Since 2001, USAID, in coordination with HHS/CDC, has been providing direct support to a number of national FETPs. Recently, USAID, working with four African programs and the HHS/CDC, provided the seed funds for the formation of the African Field Epidemiology Network (AFENET). AFENET, established in 2005, has quickly become a critical element of promoting improved public health training in the African region. Its member network of five field epidemiology training programs in Africa (Ghana, Uganda, Kenya, Zimbabwe, and South Africa) has trained hundreds of African epidemiologists who are an important human resource in local and national efforts to detect and respond to infectious diseases. In fact, approximately 95% of all Africa FETP graduates remain in government service as public health practitioners at local, district, and national levels. AFENET's continued promotion of high quality epidemiology training has crystallized into a resounding desire for many African countries to start their own FETPs, including Ethiopia, Tanzania, southern Sudan, a regional francophone program in West Africa, and Nigeria.

USAID's Avian Influenza Program is providing technical and financial support, along with CDC, the government of Nigeria and AFENET, to develop the first field epidemiology training program in Africa that integrates veterinary medicine, laboratory training, and field epidemiology into a combined program. This innovative approach will serve as a model for other countries in Africa to improve the integration of animal and human health professionals in a manner that will facilitate more effective and efficient ways to address zoonotic diseases such as avian influenza.

- USAID has been providing support to and collaborating with HHS/CDC to support the World Health Organization's Integrated Disease Surveillance and Response (IDSR) strategy in Africa since 1996. The IDSR strategy aims to improve the availability and use of surveillance and laboratory data for control of priority infectious diseases that are the leading cause of death, disability, and illness in the African region.

- DOD's field laboratory stations provide critical support to several of USAID's programs in countries such as Nigeria, Peru, Egypt,

and Indonesia. For example, in Indonesia we supported NAMRU-2 to expand human influenza surveillance to areas experiencing animal outbreaks.

- USAID is also partnering with a number of NGOs in support of infectious disease surveillance. As noted earlier, USAID is working with the Wildlife Conservation Society to establish the Wild Bird Global Avian Influenza Network for Surveillance. USAID has also recently established a grant with the International Federation of the Red Cross to develop better humanitarian response procedures for NGOs in the face of a potential pandemic of avian influenza.

Zoonotic Diseases

One of the most important lessons in human health of the last thirty years is that the human population is facing an increasing risk from infectious diseases of animal origin.[2] Human-animal interactions have always been a critical factor in the transmission of disease. Of the 1,415 pathogens that infect humans, 62% originated in animals.[3] Examples of these diseases include SARS, Avian Influenza, HIV/AIDS, Ebola, and the West Nile Virus. A variety of factors are contributing to this phenomenon, including international travel, global trade, human behavior, rapid microbial adaptation, increasing interaction among humans and domesticated food animals, and changing climates and ecosystems. Although the emergence of many of these diseases is difficult to forecast, (there were three influenza pandemics in the 20th century), we are comfortable in saying that the regular appearance of new infectious diseases of animal origin is virtually inevitable.

Several recent outbreaks have demonstrated how our previous investments to strengthen multi-disease surveillance in the region facilitated critical detection and response of zoonotic diseases. For example, this past spring an outbreak of Rift Valley Fever, a rare disease with the potential to cause severe disease in both humans and livestock, occurred in East Africa. In

[2] Marano N, Pappiaoanou M. Historical, new, and reemerging links between human and animal health. Emerg Infect Dis [serial on the Internet]. 2004 Dec [9/25/07]. Available from http://www.cdc.gov/ncidod/EID/vol10no12/04-1037.htm

[3] Kruse H, Kirkemo A-M, Handeland K. Wildlife as source of zoonotic infections. Emerg Infect Dis [serial on the Internet]. 2004 Dec [9/25/07]. Available from http://www.cdc.gov/ncidod/EID/vol10no12/04-0707.htm

Tanzania, one of several affected countries, collaboration among USAID, CDC, WHO, FAO, and others led to rapid detection, which permitted a timely response by the Government of Tanzania (GOT) to control the outbreak. The GOT acknowledged that their ability to mobilize a response was greatly enhanced by the relationships that were fostered over the past year between the Ministry of Health and the Ministry of Agriculture by the USAID avian influenza program. A similar example is unfolding in the Democratic Republic of the Congo (DRC) where detection and control of an outbreak of Ebola is being facilitated by our avian influenza program. In both cases, control measures included the provision of personal protective equipment (PPE) provided to protect against pandemic influenza.

Of course, surveillance data is most useful when it leads directly to an appropriate response that prevents adverse events. USAID programs are based on this principle and seek to connect the collection and analysis of data to a tailored and appropriate response.

These examples underscore the fact that zoonotic diseases can appear with little or no warning. Since we cannot predict what disease may be emerging next, there is an urgent need to build capacity to prepare for any newly emerging disease.

Accordingly, USAID is moving forward with a more comprehensive surveillance and response program to address this issue. We are further integrating surveillance into our existing programs. We are also working to integrate veterinary and human health in a way that will enhance prevention and control strategies for zoonotic diseases. In addition, we have commissioned the Institute of Medicine at the National Academy of Sciences to convene an expert consensus committee to consider the challenge of achieving sustainable global capacity for surveillance and response to emerging diseases of zoonotic origin such as SARS and avian influenza. The committee will review the emergence and spread over the last several decades of a diverse range of agents of zoonotic origin. They will study the causes underlying this growing phenomenon, trends in these factors, and the implications for long-term domestic and international development and security.

It is anticipated that the IOM's findings, which will be released in 2008, will guide programming for zoonotic diseases in a way that builds sustainable surveillance capacity for the early detection of global health threats.

Together with our partners, USAID remains a key supporter of programs in infectious disease surveillance. Through our partnerships with other USG agencies, the private sector, and certainly the support of Congress, we will continue to improve the capacity of developing countries to detect and respond to infectious diseases.

STATEMENT OF
NATE FLESNESS
EXECUTIVE DIRECTOR
OF THE
INTERNATIONAL SPECIES INFORMATION SYSTEM

before the

SUBCOMMITTEE ON OVERSIGHT OF GOVERNMENT MANAGEMENT, THE FEDERAL WORKFORCE, AND THE DISTRICT OF COLUMBIA
COMMITTEE ON HOMELAND SECURITY AND GOVERNMENT AFFAIRS
UNITED STATES SENATE

On

Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas

October 4, 2007

Mr. Chairman and Members of the Subcommittee:

Thank you for the opportunity to testify on the role that the Zoological Information Management System (ZIMS) can play in providing early warning and surveillance of emerging zoonotic infectious diseases for both the U.S. and other countries. I also am pleased to discuss opportunities for collaboration and cooperation between ISIS and the federal agencies charged with infectious disease surveillance and the critical connection between animal diseases and public health in general.

The International Species Information System (ISIS) is a U.S.-based non-profit that facilitates information exchange between 700 zoo and aquarium member institutions in 73 countries on six continents, including 263 in 47 states in the United States. Honolulu Zoo director Ken Redman sends his regards to you, Chairman Akaka. He would welcome the opportunity to show you what he plans to do with our new program ZIMS at his zoo.

Headquartered near Minneapolis with branch offices in Australia and Amsterdam, ISIS is by far the world's largest zoo and aquarium membership organization. U.S. and international ISIS membership lists and member maps are attached.

ISIS serves as the animal and veterinary global database for zoos and aquariums around the world and collects data on a total population of two million animals representing 10,000 species. ISIS was founded in 1974, and has expanded membership every year since then. ISIS has created a unique international cooperating network of trust with a

long history of sharing animal information across international boundaries. In 2007, ISIS added 40 new members, mostly in Europe. ISIS now covers most accredited zoos in North America, Europe and Australasia, plus a growing number in Asia, Africa, and Latin America. ISIS' expansion continues with the government of India announcing this year that they will be sponsoring 59 Indian zoos to join ISIS.

For thirty-four years, ISIS has designed and delivered four successively sophisticated generations of information technology that support zoos and aquariums in their missions to conserve their collections of living – and increasingly, endangered – animals. ISIS is now completing the next generation: ZIMS, a state-of-the-art, web-based software for zoos and aquariums worldwide that will operate in real-time. ZIMS, a $25 million effort, has been designed through a massive global collaboration of more than 500 zoo and aquarium professionals through numerous meetings, webinars and e-forums, and is nearly complete. This broad constituency is now helping ISIS test ZIMS and is eagerly awaiting the chance to begin using it when it rolls out worldwide next summer.

Veterinary staff in this global network will use ZIMS daily to record signs, diagnoses, treatments and necropsy findings on more than two million individually tracked animals of 10,000 species. A key feature of ZIMS is that it is designed to meet the day-to-day needs of those entering the information. ISIS participation is voluntary – more than 15,000 veterinary and other staff at zoos and aquariums around the world enter information into ISIS systems every day because it helps them perform their jobs – caring for animals. This is a huge advantage over systems to which people are asked to "report." Additionally, the new ZIMS data record also will be *the* individual institutional record – there will not be separate record keeping systems. Put another way, a zoo's record-keeping system will be ZIMS. And for the first time in the zoological community, there will be one, global, lifetime, permanent ID number assigned to each animal.

Deleted: everyday

Zoos Standing Watch for Animal – and for Human Health

The zoo community's surveillance for disease outbreaks in our own animal collections is arguably more intense than any other. Zoos must take all appropriate steps to protect their irreplaceable living collections from threatening diseases. Building and adopting ZIMS is an essential step for them to protect their own business and ZIMS supports their missions to help stand watch for disease. It makes sense for us to pool our monitoring efforts a step further and help guard the public against infectious diseases. The Association of Zoos and Aquariums strongly supports ISIS-ZIMS.

Emerging Zoonotic Disease Surveillance

The zoo world is inherently international because animals move constantly from zoo to zoo around the world. Sharing data worldwide with other institutions with the same animals is a critically important best practice for high-quality care of exotic animals. Nowhere on earth is animal health monitored as closely as in zoos and aquariums, and nowhere is international data on those animals shared more than through ISIS. And while Avian Influenza is a current major concern, zoos monitor for all diseases, including

new and emerging ones. What they find will be recoded in ZIMS. Because of this intense monitoring of animal health, zoos and aquariums around the nation constitute an early warning system for infectious diseases.

Diseases in the news like Avian Flu, SARS, Monkey Pox and West Nile Virus are not new – they have existed in animals for sometime. What is new is the way diseases are crossing the species barrier and migrating to humans. As environmental changes occur, the traditional boundaries separating humans from existing diseases also change, opening the door to new human epidemics. Historically, most new epidemics first show up in animals and then migrate to humans.

Zoos and aquariums depend on the health of their animals for their very livelihood. Animals are observed, inspected, and closely monitored many times each day. Veterinary records (animal observations and treatments) are entered daily. In addition, all animals that die on zoo grounds (e.g., birds, squirrels, mice), whether part of a zoo's collection or not, are necropsied by zoo staff.

A renowned example is Dr. Tracey McNamara, formerly of the Bronx Zoo. In the summer of 1999, New York City was plagued by an uncommon sight: dozens of dead crows, found at the Bronx Zoo and throughout metropolitan New York. At the same time, apparently unrelated, elderly patients checked into area hospitals suffering from muscular weakness, fever and confusion. At least seven people eventually died. Dr. McNamara, the zoo's staff pathologist, established a connection between these events and helped to pinpoint the cause: West Nile Virus. The Centers for Disease Control and Prevention credit her with potentially saving many lives. Incidentally, Dr. McNamara currently is an advisor to ISIS on ZIMS.

The zoological community's strength in disease surveillance is that it is looking for the unknown – zoos test everything that dies. It was because of this that the Denver Zoo discovered last May that an eight-year-old hooded capuchin monkey was a victim of the bubonic plague outbreak that was moving through the City Park neighborhood near the zoo. While risk to the public was extremely low, public health officials warned the local population that they should not handle rodents and should keep their pets away from dead squirrels or rabbits.

Year's ago, the Defense Advanced Research Projects Agency (DARPA), the central research and development organization for the Department of Defense, recognized that zoos could be an integral part of any biodefense surveillance network. However, there has not been the opportunity to enlist the zoological community in a proactive and integrated way until now with ZIMS.

Unfortunately, the overwhelming majority of disease surveillance focuses solely on human patients, despite the fact that in all significant outbreaks of new diseases over the past decade or more in North America, animals were the first victims. The largest and most economically significant disease outbreaks among humans had animal sources. All of the CDC's Class A and Class B bioterrorism diseases (with the sole exception of

smallpox) are animal diseases. Thus, it is highly likely that if there ever is a large-scale bioterrorism event, animals will almost certainly become ill in large numbers and probably display classic syndromes recognized easily by the veterinary community. It is certainly not enough to watch for outbreaks only in the human population and we applaud the Subcommittee for recognizing the critical relationship between animal and human health.

The Power of ZIMS for International Biosurveillance

Until ZIMS, the mechanisms by which the wild animal veterinary community tracks emerging zoonotic diseases internationally were extremely limited, scattered, and anecdotal in nature. ZIMS will transform this loose network into a unified global database. The state-of-the-art, web-based architecture of ZIMS means that hard data entered into the system on its secure web server is immediately accessible to authorized users.

Clearly, there is enormous potential for rapid epidemiological monitoring and analysis. ZIMS has the capacity to alert us the same day of unusual signs or outbreaks in cities across the world. ZIMS allows a new, unprecedented level of real-time, international data sharing among 700 ISIS institutions with more than 15,000 zoological professionals who are daily monitoring the health of their animals. To our knowledge, there are no other multi-national, real-time veterinary or human medical information or surveillance systems of this scope today. ZIMS is unique.

ISIS Relationships with U.S. and International Agencies

ISIS has long-standing relationships with several federal agencies, including the U.S. Fish and Wildlife Service (USFWS), National Institutes of Health, NOAA's National Marine Fisheries Service and the National Science Foundation. For example, the USFWS uses our animal records as the "gold standard" in applications for Convention on International Trade of Endangered Species (CITES) import and export permits and captive-bred wildlife permits.

Early on, ISIS recognized the importance of ZIMS' biosurveillance potential and took the initiative to include U.S. government agencies such as the Department of Homeland Security - National Biosurveillance Integration Center (NBIC), Centers for Disease Control and Prevention, Department of Agriculture (Animal and Plant Health Inspection Service), Department of Defense, Department of State, and others in design meetings and discussions about ZIMS.

Currently we are working with NBIC officials to design a framework for sharing ZIMS data. This will assist the Agency in meeting its wildlife disease surveillance and monitoring requirements under Homeland Security Presidential Directives 9 and 10, and its obligation under its authorizing legislation to seek private sources of surveillance, both foreign and domestic, when such sources would enhance coverage of critical surveillance gaps. ISIS will provide NBIC with appropriate access to ZIMS, including outputs from

ZIMS for incidence report resolution, and/or broad epidemiological analysis in identifying disease and biological threats to the animal and human populations whether as a result of bioterrorism or naturally occurring. To date, ISIS has shared ZIMS data standards and its data model – an enormous ISIS investment in time and development funds – to jumpstart technical coordination with NBIC. NBIC officials also participated in a recent ISIS-sponsored workshop hosted by the Smithsonian's National Zoological Park to develop ZIMS data access and data privacy policies and protocols.

ISIS is looking forward to DHS' support to expedite training and implementation of ZIMS in 25-plus key U.S. metropolitan centers and several key institutions abroad. The current working list of these metropolitan areas is attached. We are also hoping for DHS support to hire staff to watch for and interpret data patterns appearing in ZIMS and act as a liaison between NBIC and ISIS members, and to adapt extant computer algorithms to automatically scan the volume of data pouring into ZIMS and look for potential outbreak patterns in space and time.

ISIS looks forward to deepening its relationship with NBIC, and to establishing closer ties with the other federal agencies represented here today. ISIS would welcome anything the Subcommittee can do to support and encourage our efforts with U.S. government agencies.

Internationally, we have met and engaged with the World Organization for Animal Health (OIE), which sent a representative to our recent workshop, several European Union agencies, including the newly established European Centre of Disease Prevention and Control in Stockholm, Department for Environment, Food and Rural Affairs in the United Kingdom, and others. We are exploring useful links with the wild bird Avian Influenza monitoring project run by the Wildlife Conservation Society (WCS), called GAINS. WCS is an ISIS member and has contributed $100,000 to the ZIMS project, and has expended an equivalent amount in-house in preparation for data conversion to ZIMS. ISIS is committed to building even stronger connections with relevant U.S. and international agencies. All of these agencies and organizations have realized how unique the ISIS global network is, and how powerful ZIMS biosurveillance will be.

Current ZIMS Funding

To date, ZIMS represents a $25 million effort, not counting several million dollars in professional time and travel donated by scores of veterinarians and other users during the design process. $8 million in ZIMS design and development costs have been invested to reach our current "testing prior to release" phase. ISIS member zoos and aquariums are mostly non-profit organizations and as such are far more likely to ask for pledges, than to make them. Nonetheless, 143 members made significant pledges totaling over $4 million to start ZIMS software development – testimony of the community's strong commitment and confidence in the promise of ZIMS. ZIMS also has received:

- $1.5 million from the David and Lucile Packard Foundation;
- $1.2 million from re-allocating ISIS operating budgets;

- $500,000 through CDC;
- $500,000 from the Institute for Museum and Library Services; and
- $300,000 from the National Science Foundation.

Furthermore, our software development vendor, CGI Inc., is donating an additional $17 million in technical assistance to ZIMS.

Realizing the Full Potential of ZIMS

The direct obstacle to full deployment of ZIMS worldwide is funding. There is strong interest in ZIMS in developing regions of the world, and we have done considerable outreach. For example, ISIS currently has Board members from Latin America, Africa, and Asia, as well as North America, Europe, and Australasia, and we are working closely with regional zoo associations on all the continents.

To be successful in expediting and expanding the ISIS-ZIMS early warning network around the globe, ISIS needs funding to provide in-region training and translate ZIMS into additional languages (currently ZIMS is already in English, Spanish, and Japanese, and we have plans for German, French, Italian, Russian, Hebrew, Thai, Indonesian, and Chinese-Mandarin). Funding also is needed to cover annual ISIS membership dues (averaging $2,000 per year) for the several hundred zoological institutions in these regions, which are not yet ISIS members and lack the resources to join. ISIS could accomplish complete global membership for approximately $2 million per year.

ZIMS has come a long way in realizing its potential as an early warning and surveillance system for zoonotic diseases, but we have more to accomplish.

I thank you again for this opportunity to testify about the great domestic and international biosurveillance potential of ZIMS to identify emerging heath threats. I look forward to answering any questions that you may have.

Statement of Daniel Andrew Janies, Ph.D.
October 4, 2007

Assistant Professor
Department of Biomedical Informatics
The Ohio State University
Columbus, OH 43210
Daniel.Janies@osumc.edu
614-292-1202

Testimony to the U.S. Senate Committee on Homeland Security and Governmental Affairs Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia

Hearing Title: Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas

Testimony Title: Geographic and genetic mapping of the emergence and spread of infectious disease, the Supermap project, supermap.bmi.ohio-state.edu

Thank you Chairman Akaka, Ranking Member Voinovich, and members of the subcommittee.

I am an Assistant Professor in the Department of Biomedical Informatics at The Ohio State University. My current research concerns the global spread of emergent infectious diseases. This work involves the use of large-scale computations on genetic and geographic data derived from viruses and their hosts, both animal and human. I received a Bachelor of Sciences degree in biology from the University of Michigan and a Ph.D. in zoology from the University of Florida. I worked as a postdoctoral fellow and a principal investigator at the American Museum of Natural History in New York City where with funding from NASA and the City we built one of the largest computers used in biological research.

At Ohio State we are working at local, state, and international levels. Our students come from every county in Ohio, every state in the nation, as well as over 100 countries. I am an active member of the Columbus Ohio Health Intelligence Team, a local initiative of Columbus Public Health and the Franklin County Board of Health to prepare for and respond to pandemic influenza. On the international level, I have taught in Brazil, Argentina, and just yesterday I worked with a representative of the Indonesian Ministry of Health.

At Ohio State and the Museum we are using public databases of genetic sequences from viruses isolated from human and animal hosts. Just as deciphering an enemy code can provide warning of an attack, we are decoding the genetic sequences of emergent viruses in order to protect our citizens and food supplies.

We are interested in genetic codes such as mutations that confer drug resistance among viruses and permit viruses that were once restricted to animal hosts to infect humans. With funding from DARPA, we have created a computational system to rapidly compare genetic sequences and return a global map depicting the spread of viruses carrying key mutations over various hosts, time, and geography.

As demonstrated by the success in stopping SARS, the rapid collection and dissemination of sequence data throughout the research community are key components in the fight against emergent diseases. Decision makers and the research community must work together to translate raw data into actionable knowledge.

Once a virus is sequenced, the next step is to put the raw data in the context of known, related viruses. This context allows researchers to apply biomedical background knowledge as to whether pharmaceutical interventions are warranted or other means will be necessary to avert a pandemic. However the biomedical context alone does not inform decision makers about the movement of dangerous viruses.

The next step is what makes our disease mapping system so special. We have developed the information technology to track the stepwise movement of diverse strains of viruses over different countries and among various hosts. We monitor the spread of dangerous strains of viruses that are resistant to drugs and or are able to infect human and animal populations. Regional threats are forecast based on the distribution of these dangerous strains with respect to their proximity to population centers, farms, and areas of military deployment.

As we scale our computational infrastructure and staff, we are able to rapidly add new data on a wide variety of agents of infectious disease and generate knowledge on which preemptive measures are important.

Our maps are also useful for understanding the complex mixture of processes that spread disease in various regions. For example, in Indonesia it is clear that chickens are responsible for spreading avian influenza whereas in other areas, such as Central China, migratory birds are important. However illegal trade is also a concern. There was an interesting case in 2004, where an eagle infected with avian influenza was smuggled from Thailand to Belgium. While this infected eagle was quickly confined and the virus did not spread at that point, that case appears as a clear anomaly in our map, betraying an instance where illegal trade allowed avian influenza to make a huge geographic leap. Furthermore, using methods we have developed we can detect and visualize gaps in the available data that represent under surveyed regions or under reporting.

Even though we have made tremendous analytical advances, a significant portion of the data on avian influenza remains in private hands. Among the reasons for the lack of data sharing include the career aspirations of scientists who want first crack at the data and the interests of nations to assure that their citizens will have access to vaccines.

In light of the severity of the health and economic issues surrounding influenza, we have tried to change the model for data sharing via collaboration and co-authorship with international colleagues who work in the field and are providers of key viral strains for sequencing. These efforts have been exemplified by the Influenza and Coronavirus Genome Sequencing Projects, who are funded by the NIH under a mandate to share data within 45 days of collection.

I realize that data sharing issues are complex and that a balance of competition and collaboration is natural in science and international relations. We will use the data security concepts that have been developed to protect the privacy of patients while allowing clinical research to move forward be used in the context of data sharing on emergent diseases. For example, cancer research is currently being accelerated by a data sharing and analysis initiative of the NCI the Cancer Biomedical Informatics Grid. We will apply the same underlying software for analysis and mapping of infectious diseases.

Mr. Chairman and members of the subcommittee, I am pleased to have had a chance to discuss these issues with you today and welcome questions. I also would welcome an opportunity demonstrate our system to you.

Statement by
James M. Wilson V, MD
Research Faculty of Department of Pediatrics and
Director of Division of Integrated Biodefense, Imaging Science and Information Systems
(ISIS) Center at Georgetown University
Before the
Senate Homeland Security & Government Affairs Subcommittee on Oversight of
Government Management, the Federal Workforce, and the District of Columbia
October 4, 2007

Chairman Akaka, Ranking Member Voinovich and Members of the Subcommittee, I appreciate the opportunity to testify today about Project Argus, the biosurveillance priming system developed and implemented at Georgetown University's Imaging Science and Information Systems (ISIS) Center. Argus is designed to detect and track early indications and warnings of foreign biological events that may represent threats to global health and national security. Argus serves a "tipping function" designed to alert its users to events that may require action. It is not in the business of determining whether, or what type of actions should be taken.

In the late 1990's, I worked with the World Health Organization and NASA to examine environmental and climatic activities in Africa potentially associated with the emergence of the Ebola virus. This work led to the first model for rapid identification of "conditions favorable" for Ebola epidemics using satellite imagery. In 2003, we applied this idea to West Nile virus at Georgetown University's ISIS Center with funding from the Telemedicine and Advanced Technology Research Center (TATRC), the US Army Medical Research and Materiel Command (USAMRMC). This led to the concept of "graded alerting" married to "graded response", where clues of the emergence of a biological event may sensitize a network of biosurveillance analysts to begin actively searching for more information that may ultimately yield a response action. That work evolved into Project Sentinel which was supported by the National Library of Medicine (NLM) and examined the role of syndromic surveillance in biodefense. The most substantial realization of Project Sentinel was the possibility of connecting a global biosurveillance system seamlessly to hospitals in America using information technology so that patients would not be seen by American healthcare workers without access to immediate situational awareness of what that patient might have been exposed to while traveling overseas.

These early endeavors made evident the significant limitations of situational awareness relating to emerging global biological threats among our medical, veterinary, public health, and homeland security communities. We concluded that, particularly with regard to hyper-communicable diseases, there was a critical need for identifying the earliest possible indications and warnings of foreign biological threats to enhance our ability to proactively implement effective countermeasures.

Then, in the summer of 2004, we received an allocation of funds from the Intelligence Technology Innovation Center (ITIC) and the Department of Homeland Security (DHS) to support research and development of a completely novel approach in foreign biosurveillance: Project Argus. The objective of Project Argus was to create and implement global foreign biological event detection and tracking capability. Argus is based on monitoring social disruption through native language reports in electronic local sources around the globe. Local societies are highly sensitive to perceived emergence of biological threats, and the resulting conditions and responses are readily identifiable through a granular review of local sources of information. Argus specifically focuses on taxonomy of direct and indirect types of indications and warnings including:

- Environmental conditions thought to be conducive to support outbreak triggering;
- Reports of disease outbreaks in humans or animals; and
- Markers of social disruption such as school closings or infrastructure overloads.

The system is built on a broad range of technologies and capabilities including:

- Advanced operational social disruption and event evolution theory;
- Unique disease event staging and warning systems modeled after NOAA and NASA;
- Collaboration with the MITRE Corporation in developing a doctrine of bio-surveillance;
- Collaboration with the MITRE Corporation in developing state of the art real-time high performance computer and internet technologies coupled with advanced modeling and linguistics capabilities;
- Visualization and modeling capabilities developed in collaboration with NASA, and InteleSense Technologies; and
- Disease propagation modeling developed by the University of Maryland.

Project Argus has been organized into teams of from three to six analysts focused on each of nine global regions outside of the United States, each supervised by senior and chief analysts. These teams of analysts are tasked with using the technologies referenced earlier to review local, globally distributed reports and summarize relevant indications and warnings of the categories I noted earlier. Their summary reports are forwarded to senior analysts and are stored into a database to be subjected to mathematical modeling and utilized in longitudinal studies. The senior analysts bring to bear their expertise in medicine, public health, epidemiology, climate patterns and other fields and develop daily national assessments from the raw data gathered by the regional analysts. Findings are also checked against established baseline data. This represents a fundamental shift in global biosurveillance: these analysts are not only experts in identifying trends in disease but also in social behaviors associated with these events at the local level. This in-depth understanding enables the analysts to recognize unusual conditions prior to diagnostic confirmation of the biological agent involved.

We estimate we are accessing over a million pieces of information daily covering every country in the world which results in producing, on average, 200 reports per day. Using a

disease event warning system modeled after NOAA's National Weather Service, we issue Warnings, Watches, and Advisories in accordance with guidelines agreed upon by our research partners in the federal government. On average, we have 15 Advisories, 5 Watches, and 2 Warnings active on our Watchboard at any given time, with 2,200 individual case files of socially disruptive biological events maintained and monitored daily in over 170 countries involving 130 disease entities affecting humans or animals. We reached a maximum load of 3,300 individual case files maintained and monitored daily this past winter. These advisories are shared with our user community through the Argus Watchboard. This information sensitizes our user community to be vigilant for the most concerning biological events in the world; this vigilance may result in proactive requests for more information by our partners such as CDC. Since the program began, we have logged over 30,000 biological events in varying stages of social disruption throughout the world involving pathogens such as H5N1 avian influenza, other influenza strains, Ebola virus, cholera, and other exotic pathogens. Of note, while the majority of these events are naturally occurring, this capability has identified several laboratory accidents and, occasionally, allegations of intentional use of biological agents.

To facilitate operational validation, we initiated the creation of the unofficial, informal federal Biological Indication and Warning Analysis Community (BIWAC). As mentioned above, it is the BIWAC that reviews our reporting requirements with us on a quarterly basis to ensure proper product alignment with the user. The BIWAC now includes CDC's Global Disease Detection team; USDA's Centers for Epidemiology and Animal Health (CEAH); DHS' National Biosurveillance Integration Center; the Armed Forces Medical Intelligence Center; other Intelligence Community organizations; the Defense Threat Reduction Agency; and the US Strategic Command Center for Combating Weapons of Mass Destruction. The key federal decision process activated by Argus is whether to prompt for ground verification of a biological event. To enhance this process, we activated Project Wildfire, which is an experimental information sharing system that enables tactical, unclassified dialog among the BIWAC partners. Wildfire, although experimental, has attracted a substantial amount of federal use. Argus information is not the only information that triggers Wildfire discussion by the BIWAC; BIWAC members themselves share relevant information as well.

Furthermore we collaborate with CDC and USDA/CEAH. We understand that CDC provides relevant reports to the World Health Organization, and USDA/CEAH likewise provides relevant reports to the World Animal Health Organization and the United Nations Food and Agriculture Organization. We are currently in discussion with CDC and USDA/CEAH in regards to whether to provide direct access to these and other international organizations.

The inherent nature of biological event indications and warnings means that more often than not, there is a significant degree of uncertainty until ground verification has been obtained. Time is critical, particularly when considering the discovery of a novel influenza virus such as H5N1 and whether or not it may be efficiently transmitting between humans. Ground verification must occur rapidly enough to enable decision making for rapid global response. Developing an approach to integrated federally-

facilitated ground verification remains a key, critical discussion by BIWAC members, and we could benefit from guidance from the Congress. This then has direct implications for decisions regarding sharing of this information with domestic state and local authorities.

The Argus Watchboard has a much larger audience (215 users from 100 organizations) of which the BIWAC is a much smaller subgroup. We have two test user groups for state/locals: State of Colorado officials and the District of Columbia Department of Health. We have painstakingly spent hundreds of hours with these test uscrs trying to understand their operational mission space, requirements, and most importantly how they may use Argus data.

While there are many examples of Argus information having real-world applications, I would like to share with the Subcommittee several examples of what has been possible:

- Since project inception, we have served the country as the lead tactical global event detection team for H5N1 avian influenza and were the first group in the world to detect the expansion of H5N1 from southern China to Russia and then Eastern Europe. To date, we have filed over 12,000 reports of events possibly related to H5N1 avian influenza. Although media attention of H5N1 has waned in recent months, we continue to monitor the global situation with the same level of attention as the first day we began operations.
- In late 2004 and early 2005, Argus participated in the tsunami response by providing daily situational awareness reports to humanitarian responders. In commenting on our operations, the US Pacific Command wrote, "Information is power only when it's shared. The situational awareness that portions of ARGUS provided during tsunami relief efforts was an impressive attention step. We see some tremendous opportunities and value added for this capability within our area of operational responsibility, which literally covers half the globe. Thanks for keeping our situational awareness up during difficult times."
- On August 3rd of this year, Argus was the first to notify the US government of undiagnosed vesicular disease in cattle in Surrey, United Kingdom that later was diagnosed as hoof and mouth disease (FMD). Of additional interest, this event was later found to be the result of a laboratory accident, and intentional release was explored as a possible etiology but later discounted. Subcommittee Members may recall the tremendous economic damage observed during the last epidemic of FMD in the UK in 2001. This example highlights the need for Argus to not only focus on diseases that effect human health directly, but those that effect agriculture as well.
- On August 27th of this year, we were the first to report indications of the current Ebola epidemic in Kasai, Democratic Republic of the Congo. This information was made available immediately to CDC, and Wildfire was activated for the entire federal BIWAC. CDC's collaboration in rapid access to ground verification information was impressive, as it highlighted the potential reduction of the time between initial event detection to ground verification to hours and

days as opposed to weeks or months. This highlights substantial improvements needed in local disease surveillance, particularly in Africa.

- Influenza kills an estimated 250,000 to 500,000 people globally each year. The Argus team, while monitoring the current pandemic threat of H5N1 avian influenza, monitors all influenza strains in support of global influenza surveillance. This past influenza season, the Argus team issued nearly 3,000 event reports across 128 countries and 27 languages, which included 181 Advisories, 58 Watches, and 38 Warnings. We identified hundreds of reports of an H3N2 influenza virus that had possibly drifted away from the current vaccine strain of H3N2 beginning eight months ago in a multitude of countries and collaboratively worked with CDC to track this important finding. The value of this information was validated when the World Health Organization and its partners recommended a change in the southern hemisphere influenza vaccine to include an updated H3N2 strain. This represents a major accomplishment for the Argus program and highlights its potential contribution over the long term.

We have discovered the Argus methodology can be made sensitive to events involving nuclear and radiological, chemical, terrorist, political instability, genocide and conflict, crop surveillance, and natural disasters. These topical areas are currently under evaluation for potential operational use; however, initial results are very promising. The broader implications of this methodology to support the global war on terrorism, as well as basic humanitarian mission work are significant. Perhaps most significantly, our government sponsor has now described the Argus methodology as a novel analytic discipline.

We are proud of what we have been able to accomplish thus far. We reached full operational capability in July 2007 within the 12 months of current funding from the Intelligence Community. Project Argus is now integrated with the educational and research programs of Georgetown University Medical Center. The University's graduate programs have begun training the next generation of scientists and professionals as part of a new academic discipline. A comprehensive research program consisting of senior scientists, physicians, and veterinarians is working to improve the sensitivity and specificity of our surveillance capability.

But there are challenges ahead. We see Argus as providing a critical resource to many end-users, most importantly those who are tasked with protecting our homeland security and public health. Funding to bring Argus on line has come from a number of sources over the years and current research and development funding has come from the research arm of the Intelligence Community and the Defense Threat Reduction Agency. Ownership of Argus has now shifted from the Intelligence Technology Innovation Center to the Open Source Center. Funding is currently secure through July, 2008. We hope the Subcommittee and your colleagues in Congress will agree that this is a valuable resource for the national interest and that it should be maintained well beyond that date. Since such work has benefited significantly from the academic environment at Georgetown, the University is pleased to house the program; however, external funding sources would need to be found to continue current Argus work.

Beyond that, we see the need to "close the loop" by connecting this global biosurveillance resource with a comparable operation internal to the United States. As I explained previously, last winter Argus identified a possible drifted H3N2 influenza virus in China and tracked that strain of influenza as it spread to Chile, Argentina, Australia, and several other countries. We were not, however, able to monitor what occurred with that strain of influenza here within the United States since our activities, because of the funding source, are prohibited from monitoring domestically. From CDC, we did learn that, indeed, there had been an increase in H3N2 clustered initially around regions of the United States connected directly to China by international air flights. Later reports from CDC indicated this virus may be drifting away from the existing vaccine strain. The implications for proactively advising healthcare professionals are profound and warrant further study. This summer, the Department of Homeland Security issued a sole source request for proposal to the ISIS Center to initiate work on what DHS has dubbed, "Project Hyperion." However, DHS has indicated Hyperion could not be funded in FY07 but have indicated possibly FY08. It is our view that closing this loop will prove tremendously valuable to our domestic health care system, and we would strongly encourage DHS to support a domestic extension of Argus without delay. Overall, we believe Project Argus, the BIWAC, Project Wildfire, and the proposed Project Hyperion will contribute substantially to fulfillment of HSPD-7, -9, and -10; NSPD-33; and Public Law 110-53. We note the DHS National Biosurveillance Integration Center has offered to sponsor Project Argus, the BIWAC, Project Wildfire, and the proposed Project Hyperion. We stand ready to support the fulfillment of our country's need for enhanced biosurveillance.

It is also clear to us that there remains an important need for continued enhancements of Argus. For example, the current Argus network does not fully incorporate wildlife disease outbreaks. With that in mind, we have approached the Wildlife Conservation Society Global Avian Influenza Network for Surveillance and Global Animal Information Network for Surveillance. The Wildlife Conservation Society is a U. S.-based non-governmental organization with wildlife health field programs around the world; we wish to pursue collaboration that would incorporate information at their disposal into the Argus framework and vice versa for their network of users. There are, no doubt, other similar enhancements that warrant our attention. Preparing a cadre of appropriately qualified analysts will require the development of academic coursework to that end as is underway at Georgetown University.

Finally, as this rich source of information is expanded and deepened, decisions need to be made about the sharing and dissemination of what Argus and, ideally its domestic component, uncovers. What entity should sponsor information sharing from Argus? Who are the appropriate information recipients, and might that vary depending on the information secured? What would be the appropriate communication mechanism to state and local authorities?

In summary, Project Argus has changed the expectations for biological event detection. The Argus methodology is operating effectively on a global scale. The Argus

methodology is now seen as a novel professional analytic discipline with newly emergent training and education programs at Georgetown University designed to complement ongoing research and development. Project Argus has played a substantial role in promoting the creation of a group of operational biosurveillance analysts meeting national needs in support of the National Biosurveillance Integration Mission. Soon we hope this powerful capability will be fully extended to state and local authorities for fuller realization of the Argus capability.

We thank our current sponsors, the Intelligence Technology Innovation Center and the Defense Threat Reduction Agency for their support of the program and its mission. We also thank our special partner, the MITRE Corporation, and all of our collaborators for helping make this a successful program in the service of our country and the world.

Once again, I am grateful for this opportunity to testify, and I stand ready to answer any questions you might have.

Thank you.

BACKGROUND
THE ROLE OF FEDERAL EXECUTIVE BOARDS IN PANDEMIC PREPAREDNESS
September 28, 2007

Background

In 2004 the Government Accountability Office released a report on continuity of operations planning in the federal sector. The report, entitled *Human Capital: Opportunities to Improve Federal Continuity Planning Guidance* (GAO-04-384), recommended that the Office of Personnel Management (OPM) and the Federal Emergency Management Agency (FEMA) coordinate their efforts to improve guidance to federal agencies on emergency preparation and continuity of operations plans (COOP) as it relates to an agencies human capital.[1]

The report suggested two principles to guide agencies: be sensitive to individual employee needs and maximize the contributions of all employees. Additionally, the report suggested six actions to enhance continuity efforts:
(1) demonstrate top leadership commitment;
(2) seek opportunities for synergy;
(3) maintain effective communication;
(4) target investments in training and development;
(5) leverage the flexibility of human capital; and
(6) build process to identify and share lessons.[2]

The report observed that Federal Executive Boards (FEBs) are uniquely positioned to coordinate emergency preparedness effectors and recommended that OPM clearly define their role in improving emergency preparedness coordination and address any resulting capacity issues.[3]

Senators Akaka and Voinovich then requested GAO to examine the role of the Federal Executive Boards in emergency preparedness of federal agencies more closely. GAO released the report, *The Federal Workforce: Additional Steps Needed to Take Advantage of Federal Executive Boards' Ability to Contribute to Emergency Operations* (GAO-07-515), and provided further insight into the unique position of FEBs in supporting COOP and emergency response in the field.[4] **The report, discussed in more detail below, recommended that, particularly in the event of a pandemic influenza outbreak, FEBs need to be integrated into national emergency plans.**[5]

Federal Executive Boards

---

[1] Human Capital: Opportunities to Improve Federal Continuity Planning Guidance, GAO-04-384, the U.S. Government Accountability Office, April 2004, http://www.gao.gov/cgi-bin/getrpt?GAO-04-384.
[2] Ibid.
[3] Ibid.
[4] The Federal Workforce: Additional Steps Needed to Take Advantage of Federal Executive Boards' Ability to Contribute to Emergency Operations, GAO-07-515, the U.S. Government Accountability Office, May 2007, http://www.gao.gov/cgi-bin/getrpt?GAO-07-515.
[5] Ibid.

The Federal Executive Boards (FEBs), established by President John F. Kennedy in a 1961 Directive, are a forum for communication and collaboration among federal agencies outside of Washington, DC. The need for effective coordination among the field activities of Federal departments and agencies was then, and is still, very clear. Approximately 88 percent of all Federal employees work outside the National Capital Region. Federal programs have their impact largely through the actions of the field representatives of the departments and agencies. In addition, Federal representatives are the principal contact with the Federal Government for the citizens of the United States. The National network of 28 FEBs serves as the cornerstone for strategic partnering in Government.[6]

OPM has oversight of the Boards across the country and often provides them direction to improve the management and administrative functions of agencies in the field. FEBs are made up of the head of each federal agency in the given region. The members of the Board elect a Chairman every year to direct the Boards efforts and help meet the mission of FEBs, which is to be "catalysts for developing partnerships to coordinate intergovernmental cooperation to advance local and national initiatives."[7]

Federal Executive Boards perform highly valuable functions, including serving as:[8]

- a forum for the exchange of information between Washington and the field about programs, management strategies, and administrative challenges;
- a point of coordination for the development and operation of Federal programs having common characteristics;
- a means of communication through which Washington can strengthen the field understanding and support of management initiatives and concerns; and
- Federal representation and involvement within their communities.

The FEBs implement these functions, under the direction of the Office of Personnel Management. Examples of their activities are:[9]

- the dissemination of information on Administration initiatives;
- the sharing of technical knowledge and resources in procurement, human resources management, and information technology;
- implementation of the local Combined Federal Campaign;
- the pooling of resources to provide, as efficiently as possible, and at the least possible cost to the taxpayers, common services such as training courses, and alternative dispute resolution consortiums;
- encouragement of employee initiatives and better performance through special recognition and other incentive programs; and

---

[6] U.S. Code Title 5, Code of Federal Regulations Section 960, the U.S. Office of Personnel Management, Federal Executive Board, http://www.access.gpo.gov/nara/cfr/waisidx_06/5cfr960_06.html and http://www.feb.gov.
[7] Ibid.
[8] Ibid.
[9] Ibid.

- emergency operations, such as under hazardous weather conditions and natural and man-made disasters; responding to blood donation needs; and communicating related leave policies.

Pandemic Influenza

In an interview with CNN on October 6, 2005, the Health and Human Services Secretary Mike Leavitt stated that the world is "woefully unprepared" to respond to a pandemic.

The highly-pathogenic H5N1 strain of avian influenza can be transmitted from birds -- usually domestic fowl -- to humans. The first known human infection with H5N1 occurred in 1997. The virus has spread to more than 50 countries in Asia, Europe, and Africa. The World Health Organization (WHO) reports that there have been 328 confirmed human cases of H5N1 resulting in 200 deaths, as of September 10, 2007.

Influenza viruses are able to mutate rapidly, and if H5N1 mutates into a form that can be transmitted from human-to-human readily, a pandemic is likely to occur. Several clusters of suspected human-to-human transmission of the H5N1 strain of avian influenza have been reported, and an analysis published in August 2007 confirmed that a cluster of eight infections in Indonesia in 2006 involved human-to-human transmission.[10]

A pandemic is defined as a global disease outbreak.[11] While there are a number of pandemics currently threatening the health of the global human population, such as HIV/AIDS and SARS, health experts believe that a global pandemic influenza outbreak is likely to be the next major pandemic event. The World Health Organization has stressed the need for global preparedness in the event of a pandemic influenza outbreak, and continues to host meetings, conferences, and training to provide governments, non-governmental organizations, non-profit organizations, and private companies to improve overall preparedness.[12]

The Congressional Research Service (CRS) report, *Pandemic Influenza: Domestic Preparedness Efforts* (RL33145) updated February 20, 2007, provides an overview of preparedness efforts and the current challenges still facing the emergency response community. CRS provides the following background and overview of pandemic influenza:[13]

> Global pandemic preparedness and response efforts are coordinated by WHO. Domestic preparedness efforts are led by the White House Homeland Security Council, with the U.S. Department of Health and Human Services (HHS) playing a major role. Domestic response efforts would be carried out under the all-hazards blueprint for a coordinated federal, state and local response laid out in the National Response Plan, overseen by the Department of Homeland Security

[10] Yang Y, Halloran ME, Sugimoto J, Longini, Jr IM. Detecting human-to-human transmission of avian influenza A (H5N1). Emerging Infectious Disease (Sept.. 2007), *available at* http://www.cdc.gov/EID/content/13/9/1348.htm
[11] The U.S. Department of Health and Human Services, Pandemic Influenza resource, http://www.pandemicflu.gov.
[12] The World Health Organization, Epidemic and Pandemic Alert and Response, http://www.who.int/csr/disease/en/.
[13] Pandemic Influenza: Domestic Preparedness Efforts, RL33145, Congressional Research Service, February 20, 2007, http://www.congress.gov/erp/rl/html/RL33145.html.

(DHS). HHS officials would have the lead in the public health and medical aspects of a response. The federal government has released several pandemic flu plans to govern federal, state, local and private preparedness activities.

There are concerns about how a domestic public health and medical response would be managed during a flu pandemic. There is precedent, under the Stafford Act, for the President to declare an infectious disease threat an emergency (which provides a lower level of assistance), but no similar precedent for a major disaster declaration (which provides a higher level of assistance). In any case, many of the needs likely to result from a flu pandemic could not be met with the types of assistance provided pursuant to the Stafford Act, even if a major disaster declaration applied.

Vaccination is the best flu prevention measure. But because of continuous changes in the genes of flu viruses, vaccines must be "matched" to specific strains to provide good protection. A pandemic flu strain would, by definition, be novel. Stockpiled vaccine would not match, so stockpiling in anticipation of a pandemic is of limited value. In addition, global and domestic capacity to produce flu vaccine is limited. The U.S. government, primarily through HHS, has launched an aggressive effort to expand domestic vaccine production capacity, and to develop technologies to support more rapid production of a matched vaccine at the onset of a pandemic.

Since matched vaccine would not be available at the outset of a flu pandemic that occurred within the next several years, planning efforts focus on measures to slow the spread of disease, and mitigate its effects. These include stockpiling of antiviral drugs to prevent or treat flu infection, planning for medical surge capacity, and continuity planning for businesses and utilities.

Federal Executive Boards' Role in Emergency Preparedness

In its recent report, GAO found that the role of the FEBs still has not been formalized in any national emergency response plan.[14] Nonetheless, all of the FEBs are taking part in some emergency preparedness, and a few have taken their own initiative to work with the federal, State, local, private, and non-profit groups in their area to establish relationships and agreements in preparation for an emergency.

Many FEBs already have expertise in emergency preparedness. In 1995 the Oklahoma Federal Executive Board supported the search and rescue effort after the bombing of the Murrah Federal Building and provided support to victims and families by arranging counseling sessions.[15] The Federal Executive Board of Minneapolis sponsored a pandemic emergency preparedness exercise in February of 2006 and October of 2006 in conjunction with the U.S. Department of

[14] The Federal Workforce: Additional Steps Needed to Take Advantage of Federal Executive Boards' Ability to Contribute to Emergency Operations, GAO-07-515, the U.S. Government Accountability Office, May 2007, http://www.gao.gov/cgi-bin/getrpt?GAO-07-515.
[15] Ibid.

Health and Human Services, the regional jurisdictions, and nonprofit organizations. In Hawaii the Honolulu-Pacific Federal Executive Board lists emergency preparedness, security, and employee safety as a priority of its mission.[16]

The GAO report specifically evaluates the challenges and support that FEBs can provide in the event of a pandemic influenza outbreak. A pandemic influenza outbreak threatens the most critical resource available to federal agencies--human capital--and can occur over large area and an extended time period. FEBs are part of a collaborative network of organizations that can "operate horizontally across agencies and integrate the strengths and resources of organizations in the public, private, and nonprofit sectors."[17] They can help communicate and coordinate throughout the government agencies in a region, and build the necessary relationships in the community to meet the unique demands of a pandemic.

Many Federal Executive Boards, as part of their regular activities, provide regular training--from management skills to pandemic preparedness--for federal agencies and other local governments and organizations. The focus for much of the emergency preparedness and pandemic exercises is to protect essential government functions from stopping. For example, the Greater Boston Federal Executive Board teamed up with FEMA and the Massachusetts Emergency Management in November 2006 to review ways to help increase the awareness of federal, state, local, and tribal government agencies of the requirement to incorporate pandemic influenza into continuity of operations planning and identify special considerations for protecting the health and safety of employees maintaining essential government functions and services during an outbreak..[18]

OPM has been working with FEMA to address the role of FEBs and general preparedness of the federal workforce. They recently developed and launched a Web site, http://www.opm.gov/pandemic, for federal agency preparedness and published a pamphlet entitled, "Preparing for a Pandemic Influenza: Helpful Information for Federal Employees." The challenge for FEBs is their lack of a consistent, dedicated funding stream and their role outside of an institutionalized, formal agency structure.

Additional Resources

- The Office of Personnel Management, Pandemic Influenza Brochure, http://www.opm.gov/pandemic/pandemic_guide/index.asp.

- The Federal Workforce: Additional Steps Needed to Take Advantage of Federal Executive Boards' Ability to Contribute to Emergency Operations, Government Accountability Office Report, GAO-07-515, May 2007, http://www.gao.gov/new.items/d07515.pdf.

---

[16] Honolulu-Pacific Federal Executive Board, Mission Statement, http://www.honolulu-pacific.feb.gov/.
[17] The Federal Workforce: Additional Steps Needed to Take Advantage of Federal Executive Boards' Ability to Contribute to Emergency Operations, GAO-07-515, the U.S. Government Accountability Office, May 2007, http://www.gao.gov/cgi-bin/getrpt?GAO-07-515.
[18] Ibid.

- Human Capital: Opportunities to Improve Federal Continuity Planning Guidance, GAO-04-384, the U.S. Government Accountability Office, April 2004, http://www.gao.gov/cgi-bin/getrpt?GAO-04-384.

- Leveraging Collaborative Networks in Infrequent Emergency Situations, Donald P. Moynihan, Assistant Professor of Public Affairs, Robert M. LaFollette School of Public Affairs at the University of Wisconsin-Madison, IBM Center for the Business of Government, June 2005, http://www.businessofgovernment.org/pdfs/MoynihanReport.pdf.

- Influenza Pandemic: Opportunities Exist to Clarify Federal Leadership Roles and Improve Pandemic Planning, GAO-07-1257T, Testimony of Bernice Steinhardt, Director of Strategic Issues, Government Accountability Office, Hearing of the House Homeland Security Committee, Subcommittee on Emerging Threats, Cybersecurity, and Science and Technology, September 26, 2007.

- Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies, GAO-06-15, Government Accountability Office, October 2005, http://www.gao.gov/new.items/d0615.pdf.

- Pandemic Influenza: Domestic Preparedness Efforts, RL33145, Congressional Research Service, February 20, 2007, http://www.congress.gov/erp/rl/html/RL33145.html.

- The Office of Personnel Management, Federal Executive Boards' Web site: www.feb.gov.

- World Health Organization, Epidemic and Pandemic Alert and Response, http://www.who.int/csr/disease/influenza/pandemic/en/index.html.

- The Department of Health and Human Services, Pandemic Influenza Resource Center, http://www.pandemicflu.gov.

BACKGROUND
PREPARING THE NATIONAL CAPITAL REGION FOR A PANDEMIC
October 2, 2007

Background

This will be the third OGM Subcommittee hearing on strategic planning and preparedness in the National Capital Region (NCR) in the past two years, and is the second in a series of three hearings the Subcommittee is holding on pandemic influenza preparedness. This hearing will examine the various pandemic response plans in the region and the steps being taken to address overall preparedness of the NCR in the event of such an emergency. The hearing will focus on three main areas related to pandemic influenza preparedness: funding and support of emergency response for pandemic planning in the NCR, evaluating the development and exercising of strategic plans, and the issues related to treatment in the event of an outbreak.

In 1997, a new strain of avian influenza -- named H5N1 for its genetic makeup -- emerged in Hong Kong and killed six people. It has since spread to other countries in Asia, Europe, and Africa, where it has infected more than 300 people, killing more than half of them. The situation has raised concern about the possibility of a global human pandemic. Flu pandemic of modest severity would strain public health and healthcare systems worldwide. Moreover, although flu viruses do not directly harm physical infrastructure, a severe pandemic could affect infrastructure and commerce through high absenteeism, supply chain disruptions, and other effects.[1]

Public health functions in the United States are decentralized, with states in the lead for most public health functions, such as disease surveillance and quarantine. In many states, local public health authority is also decentralized, under the control of local rather than state health officials. The federal government provides funding, guidance and technical assistance to state and local planners, and can require that certain activities be carried out as a condition of funding. But the federal government has limited authority to direct the planning efforts of states and localities.[2]

Because the states are the seat of most authority for public health and medical preparedness, national preparedness for public health threats depends, in part, on the preparedness of individual states. Pandemic planning at the federal, state, and local levels is woven into broader all-hazards emergency planning, and the response to a pandemic would employ the same basic approaches to leadership, authority, coordination, assistance, and financing as with other incidents. However, a flu pandemic would pose at least two challenges that may be unique to this threat, which may merit specific attention in planning: the likelihood that all jurisdictions would be affected, at nearly the same time; and the potentially prolonged period -- many months -- during which a response posture would have to be maintained. The near-simultaneous nature of a pandemic likely would diminish the value of state-to-state mutual aid, an important tool in the response to localized incidents. The prolonged effects of a pandemic, coupled with potentially high absenteeism, could pose exceptional challenges in maintaining continuity of operations

[1] Pandemic Influenza: An Analysis of State Preparedness and Response Plans, Sarah A. Lister and Holly Stockdale, Domestic Social Policy Division, Congressional Research Service, September 24, 2007, RL34190.
[2] *Ibid.*

(COOP) for essential services, including continuity of government.[3] The Federal Emergency Management Agency (FEMA), the Department of Health and Human Services, and the Centers for Disease Control and Prevention (CDC) have assisted -- through grants mostly -- many states, major cities, and local areas in developing emergency response, continuity of operation, coordination, and communication plans for pandemic.

The National Capital Region is comprised of the District of Columbia, Maryland, Virginia, 11 local jurisdictions, three branches of federal government, and over four million Americans. Nearly 20 million tourists visit the NCR every year; 130,000 students attend one of the 40 colleges and universities in the NCR; there are 27 hospitals in the NCR; 340,000 federal employees work in the area for one of 231 federal agencies; and the NCR is home to the Nation's second largest rail transit system.[4] Congress established the Office of National Capital Region Coordination (ONCRC) in the Homeland Security Act of 2002[5], which is charged with overseeing and coordinating federal programs and domestic preparedness and response initiatives for state, local and regional authorities in the NCR.

Last year, the National Capital Region released a security strategic plan[6] to address preparedness and collaboration efforts of the area jurisdiction. This strategic plan is not an operational emergency plan; it does not explain how the NCR should respond to any particular emergency. It explains how the jurisdictions will coordinate a response in the event of a terrorist attack or disaster. Because emergency response is a local responsibility, as recognized by the National Response Plan, each local jurisdiction has developed its own set of emergency operations. Those operations plans prescribe how the jurisdictions in the NCR would respond to an emergency such as a pandemic outbreak. The duration of time, the scope of those affected, and the jurisdiction of whom responds are just a few of the challenges facing the National Capital Region in the event of a pandemic outbreak. However, no specific plan has been developed for NCR pandemic influenza.

Pandemic Influenza Preparedness Funding

Because a pandemic response would require the entire health care industry and emergency response management sector to support the efforts, it is difficult to track how much funding is exactly being spent on pandemic preparedness. As a result, there is no clear number on the amount of funding spent on public health preparedness as it relates to pandemic influenza. As examples, disease research funding may have an impact on vaccine development and additional ventilators and other hospital devices would be used in the event of a pandemic response, but

---

[3] Ibid.
[4] For more information on the National Capital Region, visit the Department of Homeland Security
[5] P.L. 107-296
[6] The National Capital Region Homeland Security Strategic Plan 2007-2009 was released in August 2006 in conjunction with the Department of Homeland Security, State of Maryland, Commonwealth of Virginia, and the District of Columbia. The Subcommittee held two hearings in 2006 to address the need for the NCR to develop a strategic plan and review its content. The most recent hearing on September 28, 2006 entitled, *Securing the National Capital Region: An Examination of the NCR's Strategic Plan*, examined the collective ability of the governments and responsible authorities of the NCR to respond to a terrorist attack or natural disaster, http://hsgac.senate.gov/index.cfm?Fuseaction=Hearings.Detail&HearingID=403.

their purpose is not solely for pandemic response. Furthermore, most funding and support for pandemic influenza preparedness comes from the State and local governments.

Since 2004, Congress has specified funding related to pandemic flu. Congress appropriated $50 million to HHS for activities to enhance vaccine production capacity in fiscal year 2004. In fiscal year 2005, Congress provided HHS with $100 million to bolster vaccine production, including the purchase of flu vaccine, and the FY05 supplemental provided $58 million to the CDC to purchase flue countermeasures (vaccines and antiviral drugs) and $10 million for HHS to improve the domestic production facility. The fiscal year 2006 supplemental appropriations bill included $7.1 billion for avian and pandemic flu preparedness. This included $6.7 billion for HHS in amounts to be obligated over three years -- $3.2 billion for FY06, $2.3 billion for FY07, and $1.2 billion for FY2008. The bulk of the amount requested was for HHS to support the expansion of domestic vaccine manufacturing capacity.[7]

The federal government offers three grants to assist in pandemic planning and response: a Centers for Disease Control and Prevention (CDC) grant for improved state and local public health, a Health Resources and Services Administration (HRSA) grant for hospital and healthcare system preparedness grants, and a Department of Homeland Security (DHS) grant for States and cities.[8] In fiscal years 2006 and 2007, CDC and HRSA awarded the District of Columbia approximately $1.9 million in funding for pandemic influenza; Maryland approximately $7.4 million in grant money; and Virginia approximately $9.5 million.[9] The grants are distributed on a formula of a base amount plus a percentage reflective of the size of the population of each State. The District of Columbia, New York City, Los Angeles, and Chicago are also eligible to receive these CDC and HRSA grants.

The DHS grant program, the Metropolitan Medical Response System (MMRS) program, first incorporated pandemic planning in guidance to accompany FY2006 funds, and expanded the requirements in guidance for FY2007. Other homeland security grant programs may mention pandemic preparedness, but do not require specific activities or include specific benchmarks for this purpose. The MMRS program began by awarding contracts to municipalities, requiring the submission of disaster response plans as the contract deliverable. The program's scope now includes planning as well as exercising, training, and equipment purchasing.[10]

Currently, MMRS awards are provided annually to 124 of the nation's most populous cities to develop plans and conduct related activities for mass casualty incidents by coordinating efforts among first responders, healthcare providers, public health officials, emergency managers, volunteer organizations, and other local entities. In FY2007, each MMRS jurisdiction received $258,145 to establish or sustain local mass casualty preparedness capabilities. Each fiscal year, MMRS guidance explicitly requires grantees to update or revise their plans as needed to address

---

[7] Pandemic Influenza: Appropriations for Public Health Preparedness and Response, Sarah Lister, Domestic Social Policy Division, Congressional Research Service, June 7, 2007, RS22576.
[8] Pandemic Influenza: An Analysis of State Preparedness and Response Plans, Sarah A. Lister and Holly Stockdale, Domestic Social Policy Division, Congressional Research Service, September 24, 2007, RL34190.
[9] The Department of Health and Human Services, Centers for Disease Control and Prevention, Pandemic Influenza State and Local Funding, http://www.pandemicflu.gov/news/allocation.html.
[10] Pandemic Influenza: An Analysis of State Preparedness and Response Plans, Sarah A. Lister and Holly Stockdale, Domestic Social Policy Division, Congressional Research Service, September 24, 2007, RL34190.

new benchmarks.[11] Since 2004, the grant program has awarded a little over $1 million to Arlington, Virginia in the NCR.[12]

Strategic Planning and Exercising

The White House issued a National Strategy for Pandemic Influenza in November of 2005 and released an Implementation Plan in May of 2006.[13] The Plan intended to provide a high-level overview of the approach that the federal government will take to prepare for and respond to an influenza pandemic, and provide broad implementation requirements and responsibilities among the appropriate federal agencies and clearly define expectations for nonfederal entities. It also articulates expectations for nonfederal entities—including state, local, and tribal governments; the private sector; international partners; and individuals—to prepare themselves and their communities. The Plan includes 324 action items related to these requirements, responsibilities, and expectations, most of them which are to be completed before or by May 2009. It is intended to support the broad framework and goals articulated in the Strategy by outlining specific steps that federal departments and agencies should take to achieve these goals. It also describes expectations regarding preparedness and response efforts of state and local governments, tribal entities, the private sector, global partners, and individuals.[14]

CDC required States and the District of Columbia to develop pandemic preparedness plans as a condition of their fiscal year 2005 CDC public health grants and comply with the National Incident Management System (NIMS).[15] As part of the FY2006 Supplemental Appropriations, Congress required states to conduct pandemic flu exercises that would "enable public health and law enforcement officials to establish procedures and locations for quarantine, surge capacity, diagnostics, and communication."[16] Maryland, Virginia, and the District of Columbia have developed strategic response plans.[17] The other 11 local jurisdictions that make up the NCR have developed to varying degrees strategic plans as well to address pandemic influenza outbreak. As the local health departments will take the lead for any response, it is critical that they have developed and exercised strategic plans and coordinated with the State, federal, private, public, non-profit, and military partners.

Maryland, Virginia, and D.C. each have conducted at least one tabletop or field exercise in the past year. In April 2006 the District of Columbia held a pandemic response summit to

---

[11] Ibid.
[12] Fiscal Year 2007 Homeland Security Grant Department of Homeland Security Grant Program Allocation Overview, Department of Homeland Security, 2007, http://www.dhs.gov/xlibrary/assets/grants_st-local_fy07.pdf.
[13] For more information on the White House's Plans visit, http://www.whitehouse.gov/infocus/pandemicflu/.
[14] Influenza Pandemic: Opportunities Exist to Clarify Federal Leadership Roles and Improve Pandemic Planning, Bernice Steinhardt, Strategic Issues Division, U.S. Government Accountability Office, testimony before the House Subcommittee on Emerging Threats, Cybersecurity, and Science and Technology, September 26, 2007.
[15] For more information, see the Centers for Disease Control and Prevention Cooperative Agreement Guidance for Public Health Emergency Preparedness FY05, http://www.bt.cdc.gov/planning/coopagreement.
[16] H.Rept. 109-359.
[17] To view DC's strategic plan, visit http://doh.dc.gov/doh/cwp/view,a,1370,q,601380,dohNav_GID,1787,dohNav,|33139|.asp. To view Maryland's pandemic plan visit http://flu.maryland.gov/preparing.html. To view Virginia's pandemic plan visit http://www.vdh.virginia.gov/pandemicflu/.

coordinate businesses, schools, hospitals, and religious groups in the event of an outbreak. In October 2006, the Region funded a pandemic flu exercise focusing on health and medical response. Avian / Pandemic Influenza preparedness training and education for the community have been offered and 550 persons in the NCR have been educated about disease transmission, specific infection control plans and protocols, and have participated in discussions about ways to limit the spread of disease. Additionally, a "Train the Trainer" course on how to prepare their employees for a pandemic has been offered to NCR occupational health nurses. Public information officers in the District and the region also have received crisis communications training related to pandemic influenza.

On September 10, 2007, the District of Columbia conducted an exercise related to a food borne illness at the Washington Convention Center that focused on hotels and the hospitality industry. The exercise used parts of the pandemic response plan, and coordinated similar partners that would respond in the event of a pandemic outbreak. Another exercise is scheduled for October 17, 2007 to incorporate the nonprofit community in continuity of operations plans.[18]

Response Capacity

There is a growing concern that medical surge capacity could be the Achilles' heel of pandemic preparedness. To contain costs, much of the nation's healthcare system functions at full capacity under normal conditions and relies on a "just-in-time" supply chain. In Northern Virginia, the immediate bed surge capacity is 778 with a 1,110 bed surge capacity within 24 hours. The District of Columbia has increased the number of beds by 300 in the past two years. Maryland has also increased its bed surge capacity.

Pandemic flu would cause considerable shock to the medical care system. Existing surge capacity likely will be insufficient in a pandemic. Furthermore, increasing surge capacity would require implementing policies that change the way medicine is practiced. Altered standards of care may be necessary, for example, cancellation of elective surgery and beds being moved into hallways, providing healthcare at alternate sites, such as gymnasiums; changing required staffing ratios; altering scopes of practice (e.g., permitting a nurse to perform certain procedures that normally could only be performed by a physician); withholding of certain services, such as diagnostic tests; and rationing services and equipment.

The healthcare sector also is largely under private ownership, further complicating public health officials pandemic preparedness efforts. Though there are federal and state efforts to stockpile vaccines, drugs, ventilators, and other supplies, the healthcare workforce is likely to be the key limiting factor in ramping up healthcare service delivery during a pandemic.

Options to expand healthcare capacity during a pandemic include stockpiling supplies beforehand (with considerable up-front cost). CDC's Strategic National Stockpile (SNS)[19] has large quantities of medicine and medical supplies to protect the American public if there is a public health emergency (terrorist attack, flu outbreak, earthquake, etc.) severe enough to cause

[18] There are approximately 2,100 nonprofits in the NCR according to the DHS ONCRC.
[19] For more information on the Strategic National Stockpile visit the CDC's Web site at http://www.bt.cdc.gov/stockpile/.

local supplies to run out. Once Federal and local authorities agree that the SNS is needed, medicines will be delivered to any state in the U.S. within 12 hours. Each state has plans to receive and distribute SNS medicine and medical supplies to local communities as quickly as possible.[20]

While researchers are working on a vaccine for avian H5N1 influenza, the pandemic strain of influenza in unknown. There are vaccines that have been produced and stored, which may protect against the viral strain. However, it will take 4-6 months after the initial wave of pandemic influenza before a vaccine can be developed, manufactured and distributed to the public.

In the early stages of an outbreak, public health professionals believe that Tamiflu and Relenza will be the most successful antiviral drugs to treat an avian-flu strain, while a vaccine is developed. Congress appropriated $6.1 billion for HHS to purchase antiviral drugs, and they have been working with their State partners to build a stockpile that would be available to treat 25 percent of the population. They expect the stockpile of antiviral drugs to be purchased by fiscal year 2008.

2007/2008 Influenza Season

The CDC expects to use A/Solomon Islands/3/2006 (H1N1)-like, A/Wisconsin/ 67/2005 (H3N2)-like, and B/Malaysia/2506/2004-like antigens in the development of new vaccines.[21] These viruses will be used for vaccine development because they are representative of influenza viruses that are anticipated to circulate in the United States during the 2007–08 influenza season and have favorable growth properties in eggs. The type A H3N2 virus has caused the most severe morbidity and mortality within the past 30 years and is closely linked to the Hong Kong Flu of 1968, which was the last global pandemic strain. In the 30 years that the H3N2 virus has continued to circulate and evolved, an excess of 400,000 deaths have been attributed to it in the United States alone, with 90 percent of them among the elderly.

Additional Resources

- Pandemic Influenza: Domestic Preparedness Efforts, RL33145, Congressional Research Service, February 20, 2007, http://www.congress.gov/erp/rl/html/RL33145.html.
- Influenza Pandemic: Opportunities Exist to Clarify Federal Leadership Roles and Improve Pandemic Planning, GAO-07-1257T, Testimony of Bernice Steinhardt, Director of Strategic Issues, Government Accountability Office, Hearing of the House Homeland Security Committee, Subcommittee on Emerging Threats, Cybersecurity, and Science and Technology, September 26, 2007.

[20] Pandemic Influenza: An Analysis of State Preparedness and Response Plans, Sarah A. Lister and Holly Stockdale, Domestic Social Policy Division, Congressional Research Service, September 24, 2007, RL34190.
[21] For more information visit the CDC Influenza Recommendations Web site, http://www.cdc.gov/flu/professionals/acip/recommendations.htm.

- *The Americans with Disabilities Act: Allocation of Scarce Medical Resources During a Pandemic*, Nancy Lee Jones, Congressional Research Service, September 5, 2007, RL33381.

- National Strategy for Pandemic Influenza Implementation Plan, http://www.whitehouse.gov/homeland/nspi_implementation.pdf.

- The District of Columbia Pandemic Influenza Strategic Plan, http://doh.dc.gov/doh/cwp/view,a,1370,q,601380,dohNav_GID,1787,dohNav,|33139|.asp

- The State of Maryland's Pandemic Influenza Strategic Plan http://flu.maryland.gov/preparing.html.

- The Commonwealth of Virginia's Pandemic Influenza Strategic Plan http://www.vdh.virginia.gov/pandemicflu/.

- World Health Organization, Epidemic and Pandemic Alert and Response, http://www.who.int/csr/disease/influenza/pandemic/en/index.html.

- The Department of Health and Human Services, Pandemic Influenza Resource Center, http://www.pandemicflu.gov.

BACKGROUND
FORESTALLING THE COMING PANDEMIC:
INFECTIOUS DISEASE SURVEILLANCE OVERSEAS
October 4, 2007

Brief Description of the Purpose and Objectives of Proposed Hearing
Barriers to infectious disease are disappearing. The evolving nature of infectious diseases, coupled with environmental changes and the ease of global travel, puts a premium on timely and effective surveillance, detection, intervention, and treatment of emerging infectious diseases. Doing so effectively will depend on new partnerships between disciplines, institutions and nations. An effective effort will require working closely with other countries, particularly those without adequate health care resources, to monitor and provide surveillance for disease threats. There are a number of executive branch agencies with programs in place to help developing countries monitor the outbreak of infectious disease and to provide the U.S. with early warning of potential public health emergencies of international concern. These programs include the Centers for Disease Control (CDC) Global Disease Detection Program (GDD), the CDC and U.S. Agency for International Development (USAID) Field Epidemiology Training Programs, and the Department of Defense Global Emerging Infections Surveillance and Response System (GEIS). In addition to building capacity for disease surveillance overseas, the U.S. is funding a number of domestically-based surveillance programs that monitor emerging infectious disease overseas, including Global ARGUS, and the National Biosurveillance Integration System (NBIS).

The hearing will examine whether or not these efforts have been effective in providing early warning to U.S. officials of a potential disease threat, how progress is measured, and what gaps may exist in them.

Why is Global Disease Surveillance Important?
There are numerous examples of emerging and reemerging infectious diseases around the world. Many of these diseases originate in other countries and are transported to the U.S. via human or animal carriers. The increase in international travel, climate change and other variables have all accelerated this process. The recent experiences with Severe Acute Respiratory Syndrome (SARS) and tuberculosis underscore the U.S. vulnerability to these diseases. However, while measures taken at the Federal, state and local levels to prepare for a possible pandemic, particularly an influenza pandemic, are important, these efforts must be coupled with broader "situational awareness" and biosurveillance measures designed to provide U.S. public health officials with early warning of a coming disease threat. This is where global disease surveillance comes in. Effective global disease surveillance can provide an early warning to the public health community of emerging infectious diseases in other countries that may threaten to become a problem in the U.S. Recognition of a major health event should be followed by analysis of the data or information gathered and a link to needed action in the country of origin in order to contain the disease threat before it begins to cross borders.

Non-Agricultural Animals as Sentinels

The emergence of West Nile Virus in 1999 in New York City provides an important example of how non-agricultural animals can function as sentinels for emerging infectious diseases. In the fall of 1999 the mosquito-borne West Nile virus - a virus never before seen in this hemisphere - killed seven people in the New York City area and made dozens more sick. Initially, it was misidentified as a different mosquito-borne disease often found in the U.S.: St. Louis Encephalitis. This was because initially, public health officials did not link the human deaths with the deaths of wild and caged birds occurring around the same time. In fact, infection of animals in the area preceded the first human cases by at least one to two months. Large numbers of birds began dying around the region, including a number of caged and wild birds at the Bronx Zoo. However, while St. Louis encephalitis can kill humans, it does not generally kill birds. Since humans and birds were being infected by the same disease, St. Louis encephalitis was ultimately ruled out. At the same time human health professionals, including the State Department of Health, CDC and others were trying to isolate the virus causing the human deaths, the head veterinary pathologist at the Bronx Zoo performed necropsies on a number of dead flamingos located there as well as wild black crows that had died on the property. She gained agreement from the Army Medical Research Institute of Infectious Diseases to test tissue samples from the necropsies which ultimately helped in the final diagnosis of West Nile virus. It was the connection she made between the wild bird deaths and human deaths and the independent laboratory analysis that helped to 1) rule out St. Louis Encephalitis since the same disease was affecting both wild and caged birds and humans and 2) helped to isolate what was ultimately discovered to be West Nile virus.[1]

In this case, it was clear that the wild and caged birds served as a sentinel population that heralded the onset of West Nile virus in humans. Because zoos around the world have a 100% necropsy policy, which means any animal that dies on the grounds of a zoo, either caged, or one that happens on to the property, must be autopsied. In addition, zoos keep extensive tissue banks that may show unknown diseases yet to be identified. Human disease diagnosis focuses on looking for what is already known. In contrast, veterinarians are looking for what is not already known. The tissue banks kept by zoos therefore provide an invaluable resource for the public health community when new and previously unknown disease emerge in humans. Similar tissue banks do not keep samples for human outbreaks where the disease being looked for is not found.

In its September 2000 report entitled "West Nile Virus Outbreak: Lessons for Public Health Preparedness," the Government Accountability Office (GAO) concluded that links between public and animal health agencies are becoming more important because many emerging diseases affect both animals and humans, as do many viruses or disease-causing agents that might be used in bioterror attacks. However, to date, the majority of outreach between the public health and animal health communities has been confined to agricultural animals like chickens or cows.

---

[1] "West Nile Virus Outbreak: Lessons for Public Health Preparedness", GAO-HEHS-00-180, Government Accountability Office, September, 2000

However, in the West Nile case, chickens were not affected by the virus, but flamingos and crows were. Closer ties between the public health and wild animal veterinary communities would therefore be helpful in flagging some of these emerging infectious diseases and influenzas before they impact humans.

GAO REPORT: OVERVIEW OF U.S.-FUNDED GLOBAL EMERGING DISEASE SURVEILLANCE ACTIVITIES TO BE EXAMINED AT THE HEARING

October 4, 2007, GAO released a report entitled "U.S. Agencies Support Several Programs to Build Overseas Capacity for Infectious Disease Surveillance". That report summarizes several key U.S.-funded programs to help other countries do disease surveillance and epidemiological work. The report notes that the agencies that are implementing these programs are just beginning to put in place methods to evaluate the impact of surveillance capacity-building. Below is a summary of the information provided by the GAO report on several of the programs.

Global Disease Detection Initiative
The GCC initiative was established by the Centers for Disease Control in 2004 to build public health capacity to detect and respond to existing and emerging infectious diseases in developing countries. Specifically, GDD's goals are to enhance surveillance, conduct research, respond to outbreaks, facilitate networking, and train epidemiologists and laboratories. Through GDD, the CDC aims to establish 18 international centers that would work with partner countries, surrounding regions, and the WHO to support epidemiology training programs and national labs and conduct research and outbreak response around the world. Thus far, five centers have been established: in Kenya, Thailand, Egypt, China and Guatemala.

Field Epidemiology Training Programs
CDC, working with the U.S. Agency for International Development and the World Health Organization, has helped countries establish their own field epidemiology training programs to strengthen their public health systems by training epidemiologists and laboratorians in infectious disease surveillance. Each FETP is customized in collaboration with country health officials to meet the country's specific needs. CDC and USAID work with host country ministries of health in Brazil, Central America, Central Asia, China, Egypt, Ghana, India, Jordan, Kenya, Pakistan, South Africa, Sudan, Thailand, Uganda, and Zimbabwe to build surveillance capacity through the FETPs. The FETP graduated 351 epidemiologists and laboratorians in 2004-2006.

Integrated Disease Surveillance and Response
USAID CDC and WHO have worked together to design and implement Integrated Disease Surveillance and Response in 46 countries in the African region. The goal of this program is to utilize limited public health resources effectively by integrating the multiple disease-specific surveillance and response systems that exist in these countries and linking surveillance, laboratory confirmation, and other data to public health actions. For its part, CDC has developed an assessment tool to determine the status of surveillance systems throughout Africa, technical

guidelines for implementing IDSR, working to strengthen the national public health surveillance laboratory systems and conducted evaluations of the cost to implement IDSR in several African countries.

Global Emerging Infections Surveillance and Response System

Over the last fifty years, military-run laboratories in countries such as Panama, Puerto Rico, Brazil, Congo, Uganda, and Malaysia were shut down for a variety of reasons, including budget cuts and changing strategic needs. In response to concerns that the loss of these overseas laboratories used by the Department of Defense left the U.S. vulnerable to emerging infections, President Bill Clinton issued Presidential Decision Directive NSTC-7 in 1996[2]. NSTC-7 called on DoD to support global surveillance, training, research, and response to infectious disease threats. GEIS provides funding to the five overseas DoD research labs in Egypt, Indonesia, Kenya, Peru, and Thailand. Many projects are conducted jointly with host-country nationals, providing opportunities to build capacity through participation in disease surveillance projects. In 2005 and 2006, GEIS funded 60 capacity-building projects.

National Biosurveillance Integration System (NBIS)

HSPD-10 directed the Secretary of the Department of Homeland Security to establish a national biosurveillance group that capitalizes on existing surveillance systems focused on human disease, food, agriculture, water, meteorology, and the environment and to collate, integrate, and analyze the information from these systems and disseminate it to appropriate Federal departments and agencies. In response, DHS created the National Biosurveillance Integration System (NBIS), which seeks to integrate disparate agency electronic biosurveillance systems to create a national biological situational awareness capability. NBIS is supposed to provide early recognition of biological events, natural or intentional, including natural disease outbreaks, use of biological agents and emergent biohazards by acquiring integrating, analyzing and disseminating information from existing surveillance systems.

A recent audit of NBIS by the DHS Inspector General concluded that it is falling short of its objectives because it has not been provided consistent leadership and staff[3]. Since its creation, NBIS has been shifted among DHS organizations numerous times, with corresponding fluctuations in the program approach, priority, and accomplishments. It has also struggled to secure the staff needed to manage program activities. However, since its placement in the new Office of Health Affairs, under the direction of Dr. Kimothy Smith, NBIS seems to have found a better footing and is moving toward full operation. Initially, NBIS will focus on four principal areas: avian influenza and zoonotic diseases, highly contagious foreign animal diseases, food defense, and environmental monitoring.

---

[2] http://www.geis.fhp.osd.mil/GEIS/aboutGEIS/historicaldocs/NSTC-7printer.html

[3] "Better Management Needed for the National Bio-Surveillance Integration System Program", Department of Homeland Security Office of the Inspector General, OIG-07-61, July 2007

Zoonotic Disease Surveillance

Not only is the nature of newly emerging disease increasingly transnational, but emerging diseases are also disproportionately zoonotic, which means that there are more new diseases making the jump from animals to humans. In fact, 60% of the pathogens causing disease in humans are first incubated in animals. Further, all of the CDC's Category A and Category B bioterrorism disease agents, with the exception of smallpox, are animal diseases[4]. It is therefore important to be able to detect not only emerging diseases generally, but also new and emerging zoonotic disease outbreaks before they begin to impact humans by establishing effective channels for coordination between zoological institutions and health authorities. Wild animal veterinarians, who typically work in zoological institutions, are often the first to detect and manage such diseases, as they have done in the cases of avian flu, SARS, and monkey pox. For example, the head veterinary pathologist at the Bronx Zoo was the first to discover the emergence of West Nile Virus in the U.S. Hundreds of zoo and aquarium professionals can therefore provide a unique and valuable real-time monitoring network or "sentinel" for detecting, identifying, and responding to many emerging infectious diseases. Zoos also perform necropsies on any animal that dies on zoo grounds and maintain tissue banks for unknown ailments, providing a valuable source of clinical data for emerging zoonotic diseases.[5]

Zoological Information Management System (ZIMS)

One channel for conveying emerging zoonotic disease information between the animal and human health communities has been developed by the International Species Information System (ISIS)[6], which has created a global network that tracks emergent animal diseases that could impact humans. Called the Zoological Information Management System (ZIMS), it is a unified global database on animal health and well-being - the first such database in the world. The 676 ISIS member institutions across the world will enter their data directly into this web-based global database. Any ISIS member (and others with permission) will be able to search the database and retrieve information they need. Part of the $10 million needed to launch ZIMS has been provided through the CDC, and DHS. In 2005, ISIS received $500,000 through the FY2005

---

[4] The Centers for Disease Control (CDC) has developed strategic plans for domestic BW. These plans are focused primarily on planning, detection and surveillance, laboratory analysis, emergency response, and communications. Category or Class A agencies can be easily disseminated or transmitted from person to person; result in high mortality rates and have the potential for major public health impact; might cause public panic and social disruption; and require special action for public health preparedness. Such agents include Anthrax (Bacillus anthracis), botulism (Clostridium botulinum toxin), Plague (Yersinia pestis), Smallpox (variola major), Tularemia (Francisella tularensis), and Viral hemorrhagic fevers (filoviruses [e.g., Ebola, Marburg] and arenaviruses [e.g., Lassa, Machupo]). Category B Diseases/Agents are moderately easy to disseminate; result in moderate morbidity rates and low mortality rates; and require specific enhancements of CDC's diagnostic capacity and enhanced disease surveillance. From the CDC website - http://www.bt.cdc.gov/agent/agentlist-category.asp.

[5] ISIS/ZIMS briefing slides

[6] Founded in 1974, the International Species Information System (ISIS) is an organization of more than 600 zoological institutions from more than 70 countries that have come together for the preservation of animal species.

DHS appropriations bill[7] and is awaiting finalization of a grant from the Office of Health Affairs for an additional $1 million. Through coordination with DHS, ISIS will provide real-time zoological data to NBIS.[8]

Global Argus Project
The Division of Integrated Biodefense in the Imaging Science and Information Systems (ISIS) Center at Georgetown University has created a mechanism for identifying indications and warnings of significant biological events around the world using open source, often media-based, information.

The frequency of biological events with a potential impact on homeland security is increasing, and current disease surveillance systems in the United States been inefficient in their capacity to detect these events in a timely fashion. The clear and present danger to the United States spans infectious diseases of humans, animals, and plants. Indications and Warnings (I&Ws) alert U.S. responders of an imminent bioevent weeks to months in advance. I&Ws are markers occurring globally, outside of U.S. borders, before an outbreak can affect U.S. interests, forces, citizens, or territory, thus allowing the U.S. time to respond. In effect, I&Ws can prime the national response infrastructure by alerting agencies of an evolving threat that could ultimately be catastrophic. Retrospective analyses of major bioevents have demonstrated the presence of multiple I&Ws were present in multiple data sources weeks to months in advance, which were not recognized and utilized properly by the national response community. For the U.S. to meet present and future biothreats that span agricultural, animal, and human considerations, an integrative strategy for information discovery, exploitation, and effective proactive use by the response community is critical. I&Ws provide a key component for integration within the U.S. biosurveillance portfolio, enabling earlier warning potential. Project Argus is the first attempt to integrate I&Ws in effort to detect catastrophic bioevents on an international scale. The Argus system serves as a primer for U.S. countermeasure response plans in the context of a potentially catastrophic bioevent.[9]

Google Earth Data Visualization Project
The Google Earth data visualization project uses the online mapping program Google Earth to plot the course of H5N1 avian influenza. The 3-D computer graphics show how the virus has spread and changed, moving to new countries and infecting different kinds of creatures. Ultimately, the researchers hope that by looking at the data in new ways they will be able to predict where the next outbreak might occur[10].

---

[7]ISIS has also secured a $300,000 grant from the U.S. National Science Foundation, $500,000 through a National Leadership Grant from the Institute of Museum and Library Services (IMLS), and $4 million from 133 members of the worldwide zoological community to build ZIMS.

[8]ISIS/ZIMS briefing slides

[9]From the Division of Integrated Biodefense website - http://biodefense.georgetown.edu/

[10]From the Ohio State University Department of Biomedical Informatics website - http://bmi.osu.edu/people_detail.php?id=171

With the Google Earth data visualization project, researchers can look at how the more dangerous variants of H5N1 have emerged so that they can develop biological control strategies. Resources to solve the problem are limited, and some potential solutions--such as stopping all migratory birds--are simply impossible. The virtual map could show researchers the best ways to focus their efforts. A web of lines superimposed on the Google Earth globe shows the various genotypes of H5N1. Each line is color-coded to correspond to a kind of host, such as waterfowl, shorebirds, mammals, or raptors. Researchers believe that by looking at the timing and location of different known mutations, they can investigate different hypotheses about which animals are responsible for spreading the virus. The team is already applying its experience to other infectious diseases. A similar map for SARS is currently in development.

The mapping project uses actual genetic sequence data from pathogens isolated from humans and animals around the world. The information mapped can provide public health officials with situational awareness of the diversity of pathogens that circulate in their area and the source of those pathogens as well as providing data on the regional prevalence of specific mutations among pathogens that confer resistance to drugs and the ability to infect humans.

As demonstrated by the response to Severe Acute Respiratory Syndrome (SARS), rapid genomic sequencing has become a primary method to identify pathogens causing disease outbreaks. Despite the value of genomic sequences in characterizing pathogens, raw sequence data on its own does not provide the information needed by public health officials to stop the spread of the disease. Key questions include: Which animal hosts that carry the pathogen? Where do the candidate hosts live and migrate? How are the hosts coming into contact with human populations, via trade or other processes? Are the pathogens resistant to drugs? Which strains of the pathogens can infect humans and where do they circulate?

Once a novel pathogen is sequenced the next step is to put the novel pathogen in the context of related pathogens. This context allows scientists to apply biomedical background knowledge such as the zoonotic potential of pathogens and informs control strategies such as animal culls, therapeutics, and vaccinations. The means the project investigators can use the data to put a novel pathogen in biomedical context are via computational searches among the genomic sequences of many pathogens for mutations shared with the novel pathogen and to communicate this information in a branching diagram, or phylogenetic tree.

However a tree alone does not reveal much about the movement of dangerous pathogens over time and geography. Understanding the geographic spread of each strain of a pathogen is also crucial for forewarning of their arrival in the United States and to stop the transmission routes of pathogens that may arrive.

Suggestions for Improvement

While global disease surveillance has taken positive steps forward since GAO reviewed such activities in an August 2001 report, Dr. Stephen Morse, Associate Professor of Clinical Epidemiology at the Mailman School of Public Health, Columbia University recently made a number of recommendations to improve global surveillance systems.[11]

---

[11]"Global Health: Challenges in Improving Infectious Disease Surveillance Systems", August 2001, GAO-01-722

In a recent article in Health Affairs, Dr. Morse pointed to a number of existing gaps in global infectious disease surveillance and how they might be addressed.[12] They include:

- Most surveillance systems are passive and disease specific,
- Global surveillance systems vary widely among countries, are numerous and fragmented, and
- There are perceived disincentives for reporting disease. Governments are often reluctant to report disease information for fear of political embarrassment, economic or trade repercussions, or concern that it may make the government look ineffectual.

Dr. Morse suggests that these gaps could be addressed through "increased political will, resources for reporting, improved coordination and sharing of information, raising clinicians' awareness, and additional research to develop more rigorous triggers for action".

[12]"Global Infectious Disease Surveillance and Health Intelligence", Stephen S. Morse, Health Affairs, Vol. 26, Number 4, July/August 2007

United States Senate Homeland Security and Government Affairs
Subcommittee on the Oversight of Government Management,
The Federal Workforce and the District of Columbia

"Pandemic Flu Preparedness in Maryland and the National Capital Region"
October 2, 2007

Testimony Submitted by Isaac Ajit, M.D., M.P.H.,
Acting Deputy Director of the Office of Preparedness and Response
Maryland Department of Health and Mental Hygiene,
State of Maryland

Pandemic Flu Preparedness in Maryland and the National Capital Region

The Maryland Department of Health and Mental Hygiene is the lead agency for FEMA Emergency Support Function #8 that coordinates the health and medical preparedness activities and response for Maryland. The State of Maryland has approximately 5.6 million residents. Demographically and geographically, Maryland is a diverse State. The population's socioeconomic, cultural and ethnic diversity provides the opportunity to develop preparedness plans and programs to meet a wide range of needs.

Maryland is both an urban and a rural state. The 24 geographic jurisdictions include inner city areas such as Baltimore City and rural mountainous areas in our western counties and agricultural areas on the Eastern Shore, bounded by the Chesapeake Bay. There are also suburban areas in close proximity to the District of Columbia that are considered part of the National Capital Region (NCR). These factors make it important for Maryland to take a coordinated and collaborative approach to planning and preparing for any emergency, including an influenza pandemic.

Maryland has been involved with pandemic influenza planning since 1999, when our initial Pandemic Influenza Plan was released. Maryland has received federal support to assist with both overall preparedness and pandemic influenza planning. In addition to funding, this federal support includes the assignment of federal staff to augment the State's capacity and capability to prepare for a public health emergency, including a pandemic. Specifically, since its inception, Maryland has participated with the Centers for Disease Control and Prevention's (CDC) Career Epidemiology Field Officer (CEFO) Program that assigned a senior level, medical epidemiologist, and career Public Health Service (PHS) officer to the State of Maryland. Maryland has also recently added another federal assignee to work specifically with the Strategic National Stockpile (SNS) Program.

Enhanced Surveillance

In addition to federal partners, Maryland has other public and private partners. Maryland works closely and is an active participant in preparedness planning with the National Capital Region. Maryland participates in the NCR Surge Planning and the Council of Governments. In addition, Maryland has contributed and participated in joint tabletop exercises and training with the NCR.

More importantly, in the past, Maryland has served as the lead for the NCR syndromic surveillance analysis and reporting. Maryland continues to take a lead in monitoring health syndromes, over the counter medication purchase, and other potential sentinel events that are captured as part of the enhanced surveillance for the State and for the NCR. Another aspect of these joint surveillance efforts with Maryland, Virginia, and the District of Columbia is the environmental air sampling monitoring for the NCR. Maryland participates in the meetings and workgroups, as well as providing data as needed as part of this critical monitoring program.

Maryland has expanded its ability to be on the forefront of medical intelligence by maintaining a physician on call for the State 24/7, 365 days a year. The physician- on- call can be reached through a single pager any time day or night. The effectiveness of having the physician on call for the State has been demonstrated repeatedly. A key example relates to the physician-on-call being instrumental in the capture of an individual who was sending letters across Maryland and to other states that he claimed contained anthrax. Fortunately, these samples tested negative for

anthrax. However, the physician-on-call serving as the main contact for reporting public health incidents for Maryland was able to identify that several of these episodes were similar in nature and possibly linked. Thus, Maryland was able to coordinate a multi-jurisdictional response.

Preparedness and Response Programs

DHMH has coordinated preparedness activities across the State. DHMH coordinates with the Maryland Emergency Management Agency (MEMA) in planning, exercising, and preparing for an emergency. Within DHMH's Office of Preparedness and Response (OP&R), the Emergency Management Coordinator (EMC) serves as the liaison to MEMA for emergency coordination and response for ESF-8. The EMC and members of the OP&R Emergency Management Team (EMT) are deployed to MEMA to staff the State's Emergency Operations Center (EOC) during an emergency. Presently, there are 14 members of the EMT from DHMH.

In addition, each of the 24 local health departments (LHD) has staff identified to work with DHMH's Office of Preparedness and Response on pandemic influenza and other potential public health threats. The staff from the LHDs also work closely with the emergency operations centers (EOC) in their local jurisdictions.

DHMH has the responsibility for coordinating a public health response for the State and would activate its Command Center as needed. If an event occurs in the NCR, Maryland would send a liaison to the NCR Command Center to facilitate communications between the command centers. DHMH has tested the effectiveness of its Command Center both in real life situations, such as during Hurricane Katrina, but also during a number of exercises.

In addition, as a result of the State's preparedness efforts, Maryland was ready to assist in a unique response during the summer of 2006. During July 2006, Maryland supported the National Repatriation Effort of United States Citizens from Lebanon. DHMH has an organizational infrastructure that allows for a rapid, organized response to emergency situations and disasters. The DHMH Office of Preparedness and Response responded to a request from the Governor to provide critical public health resources to the airport during the repatriation of United States citizens being evacuated from Lebanon. The DHMH response provided both paid

and volunteer public health services at the airport for 10 days. By utilizing personnel from OP&R and members of the Emergency Management Team as leads, the DHMH Repatriation Plan was able to be implemented.

All personnel in the DHMH Office of Preparedness and Response and members of the Emergency Management Team are considered emergency response personnel. They are trained in disaster response and NIMS/ICS. Additionally they are considered essential response personnel and are required to carry beepers 24/7 to be able to respond to Public Health disasters at a moments notice.

Moreover, under DHMH's leadership, the State is able to notify and activate over 5600 licensed and credentialed professional volunteers. These volunteers are members of the DHMH Medical Professional Volunteer Corps (MPVC) and are ready to respond to a catastrophic public health emergency such as pandemic influenza. These volunteers included over 600 physicians, more than 3,000 nurses, and over 1000 mental health practictioners. In addition, there are 540 pharmacist, 117 veterinarians, and 72 dentists on the roster for the MPVC.

Workforce Development

A key part of being prepared to respond is being trained. As noted previously, DHMH requires that the staff participating in emergency response complete the National Incident Management System (NIMS) training. Also, DHMH works with its federally funded sub-grantees to assure that they meet this federal requirement. However, it is important to have the opportunity to practice what is in the NIMS training as well as to maintain or enhance subject matter expertise. DHMH provides training for its staff and for the LHD staff involved in preparedness activities. DHMH conducts several levels of public health response team training (PHRT) and has trained over 300 staff in its basic level that was offered during 2005 and approximately 80 staff were trained when the intermediate level of this program was offered in 2006. With turnover in staff, DHMH is planning to repeat the basic and intermediate levels of training prior to conducting the advanced and train-the-trainer levels. In order to provide surge capability to the state health department, plans are underway to recruit and conduct training for additional DHMH staff.

Training is also conducted for the MPVC on an on-going basis. Future PHRT training will be designed to include the MPVC.

DHMH considers training the future workforce a key to protecting the State. As a result, DHMH trains students, interns, and residents who are attending the colleges and universities in the Baltimore-Metro area who have preparedness concentrations.

Medical Surge

DHMH has coordinated the Hospital Preparedness Program that was initially funded by the Health Resources and Services Administration (HRSA) and now has moved to the Assistant Secretary for Preparedness and Response (ASPR). Maryland has worked very closely with all of the 46 acute care hospitals and the 7 state facilities to establish surge capacity. However, it was clear very quickly that there was more to surge than simply identifying surge beds, equipment, and alternate care facilities. Recognizing the need to go beyond the inventory of physical resources, the State is formulating an operational surge plan to assist hospitals surge capability. DHMH leads the State's effort to develop this plan. A draft was prepared under the leadership of the State's Surge Technical Advisory Group (TAG). This draft plan was tested during a recent pandemic influenza exercise.

In addition to surge being part of the Hospital Preparedness Program, it is also a key aspect of the Centers for Disease Control and Prevention's (CDC) Pandemic Influenza Program. Medical surge and components are key aspects of the pandemic influenza preparedness program.

Given the constant flow of patients across jurisdictional lines in the metropolitan Washington area, it is essential that surge planning is coordinated across the NCR. To that end, a separate workgroup was established to address issues of surge capacity unique to the region. The workgroup includes representatives from all three jurisdictions.

Pandemic Influenza Exercises

In 2006, DHMH conducted its first Statewide modified functional pandemic influenza exercise. The objectives of this exercise were to test the ability of the State to recognize a pandemic, use the legal guidance using the Catastrophic Emergency Powers to declare a public health emergency and to request deployment of the Strategic National Stockpile to the State of Maryland. During this past year, DHMH and our partners have been working to improve our response capabilities based on gaps and recommendations from the after action report. In the fall of 2006, planning started to meet the CDC requirement of an exercise to address nonpharmacological interventions for pandemic influenza. DHMH convened both public and private partners, especially from the business sector to participate in the exercise planned for 2007.

From July 31, 2007 to August 2, 2007, DHMH convened its second Statewide modified functional exercise, focusing on nonpharmacological interventions. In addition to the CDC's objectives for this exercise, DHMH added objectives to test medical surge for Pandemic Influenza in several hospitals and the use of the Citizen's Corps' Community Emergency Response Teams (CERT) to conduct needs assessments in neighborhoods where persons were homebound because of isolation or quarantine recommendations. DHMH also tested the activation of the SNS and enhanced surveillance. There were over 600 participants across the State involved in the Maryland 2007 Pandemic Influenza Exercise. Montgomery and Prince George's Counties, both part of the NCR, participated in these exercises. In particular, the CERT component of the 2007 exercise was tested in Prince George's County.

Planning for an Influenza Pandemic in Maryland

The Centers for Disease Control and Prevention (CDC) has developed models that are useful for planning different scenarios for an influenza pandemic. Using the CDC model of a 25 percent attack rate, based on the 5.6 million residents in the state, Maryland could expect to have over 30,000 deaths. As part of the on-going pandemic influenza planning process, Maryland utilizes these models and scenarios to update its plans and to prepare its public health and emergency responders.

As described earlier in this testimony, DHMH has preparedness knowledge, skills, abilities, and programs that can be applied to virtually any emergency or public health catastrophe. These preparedness tools are the framework for the Maryland's pandemic influenza program.

Plans

Maryland is in the process of updating and revising its current Pandemic Influenza Plan that was released in December 2006. The current plan is available on the DHMH Pan Flu website. This plan was tested during the recent 2007 Maryland Statewide Pandemic Influenza Exercise. Based on the recommendations from CDC's review of the plan and on the After Action Report (AAR) from the exercise, DHMH will revise this plan accordingly.

As DHMH updates and revises the Pandemic Influenza Plan, other plans that integrate with this plan will be revised. Plans currently under revision include the following: (1) Medical Surge Capacity and Capability Plan; (2) Community Containment; (3) Strategic National Stockpile; (4) Isolation and Quarantine; and (5) Evacuation. All of the plans must be able to accommodate critical aspects required for a pandemic. Another major plan that is under development is the antiviral distribution plan for the State.

Antivirals

DHMH fully intends to meet the federal goal of providing antivirals to 25 percent of the state's population. The state has begun purchasing its allotment of antivirals as determined by the federal guidance. The 25 percent represents an estimate developed by the CDC based on the data from the 1918 pandemic. To date, Maryland has purchased 262,807 treatment doses that serve as a cache for public health and first responders.

DHMH has conducted point of distribution (POD) training for the LHDs so that they will be able to disseminate medications to their staff and the general public in an emergency. DHMH is developing an antiviral distribution plan that will address priority groups to receive medications when resources are scarce. As one can imagine, there are major ethical considerations that need to be addressed not only by the State of Maryland but also on a national level.

Partnerships

Addressing the concerns related to Pandemic Influenza requires strong public and private partnerships. DHMH has convened the Pandemic influenza Continuity of Operations (COOP) workgroup. This group works with members of private industry to assist them in developing pandemic influenza plans and training for their businesses and employees. In addition, DHMH has a community and personal preparedness initiative under development where the goal is to have every resident in the State of Maryland aware and prepared for a pandemic.

This is a lofty goal but when it comes to a disease that may have at least a 25 percent attack rate in the general population, pandemic influenza planning needs to have the bar raised higher than we have done so in the past.

Summary

In closing, Maryland is working across the State and the National Capital Region to prepare for an influenza pandemic. Public, private and community partnerships are the cornerstone for preparedness programs and activities in Maryland. Repeated Statewide exercises have been key to testing plans, expanding partnerships, and improving the path Maryland is taking to protect the residents should pandemic influenza become a reality.

Questions and Responses for the Record
for David Gootnick

11/19/07

GAO response to written questions posed by Sen. Akaka after GAO testimony on 10/4/07 on capacity-building for infectious disease surveillance. GAO did not respond to all the questions since some of them were not within the scope of our review.

Question 1

Some of the programs you describe, such as FETP and GEIS, have been in existence for a number of years. Why is it that these agencies don't yet have evaluations of how these programs are performing?

The FETP program developed a framework in 2006 for monitoring and evaluating the impact of FETPs on countries' health systems. Prior to this time, the FETP programs in individual countries collected information on program activities but there was no overarching evaluation effort. CDC officials told us that they did not have the funds to conduct monitoring and evaluation.

DOD has evaluated the GEIS program as a whole but does not plan to evaluate its capacity-building aspects specifically. DOD requested Institute of Medicine reviews of the GEIS program in 2001 and GEIS' pandemic influenza activities in 2007.

Question 2

Given your understanding if the various programs aimed at capacity-building, how do CDC, DOD, and USAID coordinate and communicate their capacity-building activities and avoid overlap?

CDC, DOD, and USAID coordinate their efforts by co-locating activities, detailing staff to each other's programs, participating in working groups, and communicating by phone. For instance, in Egypt, CDC's Global Disease Detection program is co-located with DOD's

research laboratory. Also, USAID and CDC officials meet regularly to plan and define their appropriate roles and responsibilities for disease surveillance capacity-building programs abroad.

Question 4

Until now, many of these surveillance systems have been disease-specific. How do NBIS, GEIS, the GDD program, and others reach beyond specific diseases and monitor and identify unknown or emerging diseases more broadly?

GDD aims to improve outbreak detection and response to emerging infectious diseases by establishing a total of 18 international centers to improve surveillance, conduct research, respond to outbreaks, and support epidemiology training programs. The epidemiology training that is provided through the GDD is not focused on specific diseases but rather is long-term training in applied field epidemiology. In addition, the GDD centers plan to integrate disease surveillance, epidemiology, applied research, and outbreak response and control activities to respond to emerging infections. For instance, scientists at the forerunner to the GDD in Thailand, CDC's International Emerging Infections Program, obtained the first specimens of the coronavirus to identify the cause of the global SARS outbreak.

DOD established the GEIS program to address threats posed to the United States and other nations by emerging and re-emerging infectious diseases. GEIS organizes its surveillance efforts in five disease groups: respiratory diseases, gastroenteritis syndromes, febrile illness syndromes, antimicrobial resistance, and sexually transmitted infections. GEIS officials told us that they make an effort to fund projects that go beyond surveillance of a particular disease, such as influenza, to include different diseases of the same general category. In addition to these five disease groups, GEIS focuses on four broadly-based surveillance areas that span all emerging infectious disease concerns: mortality surveillance, electronic data capture for surveillance, syndromic surveillance, and modeling.

Question 9

In its report, GAO notes that none of your agencies tracked obligations for infectious disease surveillance capacity-building. This concerns me. Why do you not track obligations for these surveillance activities?

The agencies track obligations made for capacity-building for infectious disease surveillance as part of broader categories. For example, USAID tracks activities that support capacity building under its line item "infectious disease-other," which also includes funding for malaria and tuberculosis; this mirrors how appropriations are made to the agency. CDC tracks spending by the programs that it funds, such as GDD or FETPs, that support capacity-building. GEIS funding is tracked by research unit, such as DOD's overseas laboratories. Like CDC, however, not all of the funds for a given research unit were used for capacity-building.

Additional Questions for the Record
For Dr. Ray Arthur

U.S. Senate Committee on Homeland Security and Governmental Affairs
Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia

"Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas"
October 4, 2007

Senator Akaka:

1. **The GAO report describes three programs supported by CDC to build overseas capacity for infectious disease surveillance – GDD, FETPs, and IDSR. What is each program's particular contribution to the overall goal of improving surveillance for infectious diseases, and how do the programs complement each other? Follow-up: How are you ensuring that the goals of these activities are being achieved? Are these programs sustainable without U.S. assistance? For example, we understand that Thailand, the very first FETP established in 1980, recently received support from CDC for its FETP program.**

   The Centers for Disease Control and Prevention (CDC) within the U.S. Department of Health and Human Services (HHS) conducts many global health programs and activities that help to build overseas capacity for the surveillance of infectious diseases. The GAO report highlighted three:

   1) Global Disease Detection (GDD): coordinates HHS resources and expertise in public health surveillance, training, laboratory methods, and response to outbreaks, to build the capacity of local and regional health institutions, and enhance their ability to respond rapidly to emerging infectious diseases. In designated locations, GDD builds upon and rolls up three previously established programs:
      a. The Field Epidemiology (& Laboratory) Training Program (FE(L)TP), which builds and strengthens Government public health agencies and systems, and provides training to scientists and public health practitioners in field epidemiology, as well as provides training for laboratory scientists using a competency based curriculum that supports laboratory based surveillance when a laboratory component is included;
      b. The International Emerging Infections Program (IEIP) which integrates disease surveillance and response; and
      c. Influenza activities, which focuses specifically on the development of local capacity for tracking strains of influenza.

   The central focus of the GDD program is the establishment of GDD Centers, connected to the activities of other HHS Operating Divisions and currently funded in five strategically critical locations: Kenya, Thailand, Guatemala,

Egypt, and the People's Republic of China. The Centers conduct activities in five key areas: response to outbreaks, disease surveillance, research, training, and networking.

2) Other FE(L)TP Activities: In addition to the FE(L)TP work funded at and through the five GDD Centers, 19 additional countries either have or are initiating FE(L)TPs. For these countries, HHS/CDC provides technical assistance in establishing and institutionalizing the programs, while the U.S. Agency for International Development (USAID), the U.S. Department of Defense (DoD) and other partners provide funding, including for the placement of HHS/CDC Resident Advisors in some places. The goal of every FE(L)TP is to turn over a fully functioning, sustainable program with a locally adapted curriculum to a national Ministry of Health, usually within six years.

3) Integrated Disease Surveillance and Response (IDSR): HHS/CDC has been a key partner with the World Health Organization (WHO) Regional Office for Africa in the design, development, implementation, monitoring and evaluation of the IDSR strategy, which aims to improve the detection, reporting, and confirmation of, and response to, priority communicable diseases. These diseases include epidemic-prone diseases (such as viral hemorrhagic fevers and yellow fever), diseases targeted for elimination and eradication (such as polio, leprosy, and Guinea worm), and existing endemic epidemics of well-known diseases of public health importance (including HIV/AIDS, malaria, and diarrheal diseases with dehydration in children under five years of age). The goal of IDSR is to develop capacities for surveillance and response at each level of the national health systems in the 46 countries in the African region.

Each of these programs, as well as HHS/CDC's other global health programs, coordinate with one another and across the Department to leverage resources and enhance detection and response to outbreaks. For example, staff from the HHS/CDC Global AIDS Program (GAP), who help implement the President's Emergency Plan for AIDS Relief (PEPFAR), played a critical role in the diagnosis of the first human case of avian influenza (H5N1) in Sub-Saharan Africa, in Nigeria in 2006. The GDD program then used its resources to deploy staff and continue response activities, such as surveillance for human cases of H5N1 and the monitoring of avian influenza cases.

HHS/CDC has developed and is implementing monitoring and evaluation frameworks for each of these programs, and will continue to measure the progress of these individual programs, assess their impact, and make corrections as necessary, when they are not achieving adequate progress towards their goals. All of the influenza-related activities undertaken by and through these programs are consistent with the *President's National Strategy for Pandemic Influenza*, are covered in its *Implementation Plan*, and come under the coordination of the Secretary of State's Special Representative for Avian and Pandemic Influenza.

The long-term goal of many of these programs is to build in-country capacity, mainly in national Governments and sub-national (Provincial or District) units, such that individual countries will be able to conduct disease surveillance and outbreak responses more autonomously and thus decrease their reliance on the U.S. Government for assistance. These programs also help countries with their implementation of the revised International Health Regulations (2005), which entered into force in June, 2007. However, even when programs are well-established, Governments do occasionally request support, and it is often an interest of the United States to have a continued physical public health and medical presence, at some level, in these countries. For example, the Thai Ministry of Health, in response to the tsunami tragedy in 2004 and the increase of international trainees in the FE(L)TP program beginning in 2006, requested HHS/CDC technical assistance to enhance the quality of its field training and strengthen its international mentoring component.

2. **How long does the CDC generally support an FETP program and what is the cost? Is there an expectation that the program will become self-sufficient?**

HHS/CDC generally supports a FE(L)TP program for about six years, as they are intended to become self-sustaining within the host-country's public health institutions. The average annual cost of program without a laboratory component is $800,000, while the cost of one that also trains laboratory managers and enhances laboratory capacity for disease surveillance, is $1.2 million. During the first few years of a program, a large proportion of funding supports HHS/CDC staff (one or two) in the host country, and technical assistance delivered by consultants from headquarters. The host Government initially provides office space and staff and, as the program progresses, gradually takes on additional program costs such as stipends for trainees, travel, equipment/supplies, books, etc. This gradual transfer of responsibility and program costs helps to ensure that the country can sustain the program once HHS/CDC staff are no longer present. In addition, HHS/CDC tracks several evaluation measures linked to the sustainability of an FE(L)TP, which provide a basis for the evaluation of self-sufficiency and serve as a guide during the development and implementation of a program.

3. **CDC supports global programs that conduct surveillance for specific diseases, namely polio, tuberculosis, malaria, and HIV/AIDS. How does CDC ensure that the efforts to conduct surveillance for these diseases contribute to the ability to detect emerging, previously-unknown diseases?**

While each program varies in scope, size, and implementation, virtually every HHS/CDC activity overseas contributes to building local capacity for detecting and responding to emerging infectious diseases. Because of our expansive

network of global programs, HHS/CDC staff members deployed overseas are often the "first responders" to emerging events or outbreaks until other field response teams can arrive on-site. For example, one of the first places to identify the coronavirus responsible for Severe Acute Respiratory Syndrome (SARS) was a Global Polio Network laboratory in the People's Republic of China, which had received support from HHS/CDC through the World Health Organization. As mentioned above, HHS/CDC GAP experts in Nigeria were instrumental in the diagnosis of the first human case of avian influenza in sub-Saharan Africa. An emphasis for Fiscal Year 2008 across all HHS international programs will be to create greater synergy from the laboratory assets funded by the Department, such that laboratory capacity is available and personnel are cross-trained to identify various pathogens, especially influenza.

4. **The GAO report indicates that you plan to open 18 GDD centers throughout the world. What criteria are being used to determine where the centers should be established? What is the agency's time frame for opening these centers? Follow-up: What are the host countries' contributions to these activities and what is being done to ensure the centers are sustainable in the long run?**

The figure of 18 GDD Centers is a future aspiration; current appropriations allow for five to be operational, and for planning to begin for a sixth. The Department selects locations for GDD Centers in consultation with national Governments, internal HHS experts, USAID, the U.S. Deprartment of State, and international partners, on the basis of five criteria:

- *Public health significance:* The country has a high population density or history of outbreaks of infectious diseases of international significance or expected potential for emerging diseases;
- *Country commitment:* Government and non-government institutions in the country support and value partnership with HHS/CDC, and will actively engage in collaborative activities and identify counterparts with whom to work
- *Established HHS/CDC presence:* The country already has an established, effective working relationship with HHS/CDC, and supports Departmental staff in-country;
- *Regional reach:* The country has the infrastructure and regional stature to serve as a regional resource, or is already acting as a regional leader in other arenas;
- *International partner presence:* The country has WHO, DoD, and other partners operating in-country.

One of the criteria for the placement of a GDD Center is the commitment of the host country Government to contribute materially to the collaboration. All of our Government partners must contribute in some measurable way. For example, Governments in middle income countries such as Thailand contribute office and laboratory space, senior scientists, surveillance infrastructure, and funding for some aspects of the joint programs. The Governments in less-developed countries, such as Kenya, have fewer financial resources to commit, but still provide office support and other support.

Sustainability is a goal of the GDD program, and we implement activities with this in mind. Long-term, we hope national Governments will be able to sustain some of the GDD activities (such as training) independently. For other activities, such as containment of outbreaks and the training of response capacity, sustainability might be more collaborative in nature, and require intermittent assistance over time.

5. **Your program collects information on notable human health events. To what extent does it address zoonotic disease or diseases that originate in nonagricultural animals?**

HHS/CDC has a long history of responding to the emergence of zoonotic diseases, and recently established a National Center for Zoonotic, Vector-borne, and Enteric Diseases (NCZVED), which has specific programmatic responsibility within CDC for these pathogens. HHS/CDC/NCZVED does not differentiate between agricultural and non-agricultural animals, but instead focuses on diseases or pathogens and how they can or might cause human illness. As a human health agency, HHS/CDC does not collect information on specific animal diseases but instead collaborates with multiple U.S. Government Departments and agencies that do collect animal information. HHS/CDC is formulating the best ways to use this animal-health information in combination with the human information that we do have to study, protect and improve the health of the country. Within the United States and abroad, and through collaborative ties with other U.S. Government Departments and agencies, and with non-governmental entities, foreign Governments, and international organizations, HHS/CDC/NCZVED conducts disease surveillance, tracks events of concern, and responds to outbreaks of zoonotic diseases.

Examples of surveillance activities include the following:

- HHS/CDC developed and manages ArboNET, an enhanced human and animal disease surveillance system, in collaboration with the U.S. Department of Agriculture (USDA) and other partners that is designed to monitor the occurrence of arboviral infections in the United States, including West Nile virus (WNV).

- HHS/CDC/NCZVED has hired a Senior Advisor for Zoonotic Influenza (a veterinarian) to specifically ensure that our influenza activities adequately address animal health communities.
- HHS/CDC has funded Purdue University in an ongoing proof of concept study to cxamine data from the electronic patient records of the Banfield Corporation (the company that provides veterinarians to PetSmart) to identify trends in animal diseases that could be transmissible to humans.
- HHS/CDC and USAID have funded the Wildlife Conservation Society in support of the Global Avian Network for Influenza Surveillance, which tracks the disease in wild bird.
- HHS/CDC also collaborate with other U.S. Government entities, such as the National Park Service and the Fish and Wildlife Service, both within the U.S. Department of the Interior, on projects that look at the human-animal interaction. We currently have a project that will look at diseases that are common to both National Park employees and animals, and what risk factors are associated with these diseases and their burden.

6. **Until now, many of these surveillance systems have been disease-specific. How do NBIS, GEIS, the GDD program and others reach beyond specific diseases and monitor and identify unknown or emerging diseases more broadly?**
   The vision of GDD is to protect the health of Americans and the global community by developing and strengthening local public health capacity to detect and respond to emerging infectious diseases, whether they are naturally occurring or result from an act of bioterrorism. To achieve this vision, HHS/CDC has tapped our international expertise in disease surveillance, public health training, and laboratory methods. The scientists who work in these programs collectively represent a valuable resource in the detection and control of infectious diseases, which range from the control of common infectious syndromes (such as pneumonia), to cutting-edge laboratory detection of rare viruses (such as Ebola and the SARS coronavirus). Thus, in conjunction with our partners, HHS/CDC is well-positioned to provide assistance and scientific input in responding to the full range of emerging disease threats.

   Experience has shown us that serious health threats like SARS in 2003 are often unknown until they emerge. Thus, is its important to be broadly prepared and build capacity and infrastructure (including cross-trained personnel) for a wide-variety of emerging health threats.

7. **Can you tell me how your program incorporates the animal health communities, specifically, the non-agricultural communities, in order to identify emerging zoonotic diseases?**

As noted above, because we recognize the importance of the linkages between animal and human health, HHS/CDC established a new national center, the National Center for Zoonotic, Vector-borne, and Enteric Diseases (NCZVED), to focus on these issues. HHS/CDC/NCZVED is actively strengthening its collaborative ties with the animal-health community, and is building new ones, especially with non-traditional partners, such as industry and the wildlife conservation and management community. HHS/CDC/NCZVED has extensively engaged partner organizations, such as the American Association of Veterinary Medical Colleges, the American Society for Microbiology, the American Veterinary Medical Association, the National Association of State Public Health Veterinarians and the U.S. Animal Health Association, in a variety of mechanisms to address the ecology of infectious diseases. This allows HHS/CDC/NCZVED, as the Department's leader in this arena, to implement a multi-disciplinary strategy to prevent, control, and, where possible, eliminate infectious diseases within a larger ecological context that includes humans, animals, and plants as they interact in a complex, ever-changing natural environment.
HHS/CDC/NCZVED is also a collaborating center for the World Organization for Animal Health (known by its French-language acronym of OIE). Examples of HHS/CDC activities that engage the animal-health community include the following:

- HHS/CDC scientists collaborated with Fort Dodge Animal Health, a division of Wyeth, to develop a vaccine that protects horses from West Nile virus;
- HHS/CDC collaborates extensively on a number of fronts with USDA's National Wildlife Health Center and Animal and Plant Health Inspection Service (APHIS), including on influenza;
- HHS/CDC helped facilitate coordination between the Kenyan Ministries of Health and Livestock and Fisheries (MoLF), the Kenyan Wildlife Service, USDA, the United Nations Food and Agriculture Organization (FAO), and the WHO, during the 2006-2007 outbreak of Rift Valley fever (RVF) in East Africa. HHS/CDC assisted in developing enhanced laboratory capacity at the Kenyan Department of Veterinary Services within the MoLF to complement laboratory capacity already established within the Ministry of Health for the diagnosis of RVF. Similarly, HHS/CDC has facilitated the establishment of an interdisciplinary pandemic-influenza working group in Kenya, which includes many of the same entities; and
- HHS/CDC included a veterinary epidemiologist from USDA/APHIS in its team sent to investigate an outbreak of brucellosis and Q-fever in Bosnia in mid-2007.

8. While the Food and Agriculture Organization (FAO) and the World Organization for Animal Health (OIE) are responsible for monitoring

outbreaks in animals, their focus seems to be on agricultural animals. FAO is concerned with food safety, while the OIE is responsible for trade. The World Health Organization focuses on human public health. There is no single organization responsible for emerging diseases, particularly those that jump to humans from animals. What do you believe should be done within the international community to better address these zoonotic diseases on a more regular basis?

The Administration recognizes that the division of responsibilities is problematic and is developing plans for international programs and activities to specifically close this gap, including through investments in the FAO and OIE by USAID and through activities of the newly established HHS/CDC/National Center for Zoonotic, Vector-borne, and Enteric Diseases (NCZVED). HHS/CDC/NCZVED has a strong emphasis on zoonotic diseases, an interdisciplinary staff (including human and veterinary epidemiologists, laboratorians, biologists, entomologists, behavioral scientists and ecologists), and a breadth of technical expertise in these areas.

HHS/CDC/NCZVED is the lead within the Department for zoonotic diseases and is forming new partnerships to focus on international aspects of the tracking and response to these pathogens. For example, HHS/CDC has established a model in Thailand, whereby HHS/CDC/NCZVED is working with our GDD Center to facilitate more effective collaboration, coordination, and communication between the Thai Ministries of Health and Agriculture, OIE, FAO, WHO and other parties on the detection and surveillance of zoonotic disease and on response to zoonotic outbreaks. HHS/CDC is exploring expansion of this model to other countries, especially those in which the Department has already invested heavily in the surveillance of human diseases and the development of local response capacity.

9. **What role do you believe moderated internet newsgroups like ProMED-mail can play in global disease surveillance and how might such newsgroups supplement or complement other surveillance efforts?**
Follow-up: Are there efforts to either expand the use of ProMED-mail or to establish similar internet newsgroups for global disease surveillance?
***Note: ProMED-mail – the Program for Monitoring Emerging Diseases – is an internet-based reporting system dedicated to rapid global dissemination of information on outbreaks of infectious diseases and acute exposures to toxins that affect human health, including those in animals and in plants grown for food or animal feed. Electronic communications enable ProMED-mail to provide up-to-date and reliable news about threats to human, animal, and food plant health around the world, seven days a week. ProMED-mail was established in 1994 with the support of the Federation of American Scientist and SatelLife. Since October 1999, ProMED-mail has operated as an official program of the International Society for Infectious Diseases, a nonprofit professional organization with 20,000 members worldwide.**

ProMED is one of many valuable sources of information about potential infectious disease threats that the GDD Operations Center at CDC monitors routinely. Other sources include the GDD Centers, HHS/CDC overseas staff and programs, and a variety of public and private-sector sources. We view all of these sources as very valuable to efforts to detect and respond to outbreaks of diseases of international concern. We analyze information from these sources by using the expertise of scientists from across the agency and the Department, who help determine the public health threat posed by a given event and guide the appropriate level of response. These scientists also reach out to field-based staff, contacts at GDD Centers, and other partner organizations around the world, as needed, for additional assessments of the risk and the need for response.

10. How can the Field Epidemiology Training Programs and the Integrated Disease Surveillance and Response program be used to help other countries implement the new International Health Regulations being promulgated by WHO?

As noted above, both the FE(L)TP and IDSR programs work to build local capacity required by the revised International Health Regulations (IHR), which came into force in June 2007, to detect, assess, notify and report public health emergencies of international concern, and to *respond* promptly and effectively to public health risks:.

- FE(L)TP trainees learn to analyze disease surveillance data critically in a timely manner, and to review national or sub-national data to detect outbreaks of disease, monitor trends and evaluate interventions. FE(L)TP trainees and graduates often are the first responders in their countries (and/or regions) to disease outbreaks and public health emergencies, and they have the required knowledge and skills to investigate and control ongoing outbreaks efficiently and make recommendations on how to prevent future ones.
- Through IDSR, HHS/CDC and the WHO Secretariat have been building an infrastructure within the African region for the early detection of disease outbreaks and the organization of the response to priority public health problems. The goal is to streamline resources, processes, and procedures in African Governments to allow for efficiencies in running a functional disease surveillance system based on standard case definitions, simplified reporting systems, improved capacity for the analysis of both acute information and longer-term trends, laboratory networks for confirming laboratory-confirmable pathogens, and the provision of feedback and ongoing training programs.

11. In an August 2001 report entitled, "Global Health: Challenges in Improving Infectious Disease Surveillance Systems," GAO observed that weaknesses in transportation and communications infrastructure in developing countries impair surveillance in these countries. Do you believe that this is still the case and if so, how does this impact the sustainability of your efforts?

Conducting disease surveillance activities in countries with limited transportation and/or infrastructure can be challenging. The Department has taken this into consideration in the planning and development of the GDD program. One of the criteria used to evaluate the placement of a potential GDD Center is "regional reach," which evaluates whether a country has the infrastructure and political and economic stature to serve as a regional resource. By selecting countries that have this basic infrastructure in place, HHS/CDC is able to maximize the impact of our programs.

Nevertheless, important advances in global communications have occurred since 2001, and have benefited public health response efforts. Examples include the containment of SARS in 2003 through an unprecedented, networked international response, as well as recent responses to outbreaks of hemorrhagic fever in remote regions of Africa.

12. What role do private health care providers play in disease surveillance in developing countries? Do they coordinate with government health officials to report emerging diseases?

Although private providers do not have direct links to Government-managed public health surveillance systems, experience has shown that it is often an astute clinician who first identifies a new disease threat. An important aspect of strengthening future efforts to detect and respond to outbreaks of disease that pose global concern is to ensure that clinicians across the world have access to high quality field investigation teams backed by sophisticated laboratories, and that they know how to communicate with Government health officials in-country and other global partners to appeal for these resources when they encounter an unusual or unexpected event. Through GDD and FE(L)TP, HHS/CDC is promoting public health training for public and private sector health professionals to increase this capacity.

13. Surveillance efforts can be constrained by uncertain linkages between data collection, analysis and response. There does not seem to be a doctrine for response. What are the triggers for action by the public health community once information is gathered and a disease threat identified using surveillance systems? Follow-up: How reliable and timely is information gathered in developing countries for surveillance efforts?

The revised International Health Regulations (IHRs), which entered into force in June of 2007, list the requirements for notification to the WHO Secretariat about

outbreaks or events that could constitute a "public health emergency of international concern (PHEIC)." An outbreak or other event that may be classified as a PHEIC is one that meets one or more of the following criteria:

- Presents a serious threat to the public health;
- Is unusual or an unexpected event;
- Poses a significant risk for international spread that potential requires international intervention; and
- Potentially causes restrictions on trade or travel.

The HHS Secretary's Operations Center (SOC) in Washington, DC, is the official national focal point in the United States for reporting and communications under the revised IHRs. In conjunction with the HHS SOC, the GDD Operations Center, physically located within the Emergency Operations Center at CDC Headquarters in Atlanta, has an important role in helping to identify and respond to outbreaks that fit the criteria for PHEIC. The GDD Operations Center serves as HHS/CDC's central analytical clearinghouse and coordination point for gathering information to recommend to policy-makers in the U.S. Government on how to respond to international outbreaks. GDD Operations Center staff collect information about outbreaks worldwide from many sources, including GDD Centers, other HHS/CDC and Departmental programs, and a wide range of public and private sources (WHO, the U.S. Departments of Defense, Homeland Security, and State; USAID, Georgetown University's Project Argus, and the Global Public Health Information Network). Experts then analyze the information with the help of scientists across the Department to sort through all of the information received, determine the threat posed by a given event, and guide the appropriate level of response.

Follow-up: How reliable and timely is information gathered in developing countries for surveillance efforts?
The reliability and timeliness of information varies based on the country, and the specific disease or event. However, the GDD Centers and other international HHS/CDC staff located throughout the world assist in these efforts. In addition to surveillance information that is collected and analyzed by the GDD Centers, other valuable, non-governmental sources including media reports within countries, responders on the ground, and information from other U.S. Government programs, is also collected. Multiple sources helps ensure that our scientists and policy-makers are accurately informed of situations as they emerge and can initiate appropriate response actions.

Lieberman:

1. **In your written testimony you state that "Approximately 75% of recently identified emerging infectious diseases affecting humans are diseases of animal origin, including many of the major recent threats to the health and**

safety of American citizens," and that "CDC recognizes the importance and need to work collaboratively, not just across the traditional public health community, but also with agricultural, wildlife, and companion animal agencies and organizations." How much of the agency's annual budget is directed toward these non-traditional collaborations?

In Fiscal Year 2007, the HHS/CDC National Center for Zoonotic, Vector-borne, and Enteric Diseases (NCZVED) provided approximately $100,000 in support of "non-traditional" collaborations with agricultural, wildlife, and companion animal agencies and organizations. Additionally, HHS/CDC has extensive in-kind professional collaboration with these organizations, and frequently works together on topics of mutual concern. Examples of the in-kind collaborative activities include the following:

- The Senior Advisor for Zoonotic Disease Science at HHS/CDC/NCZVED will temporarily serve as Acting Director of the National Wildlife Health Center in Madison, Wisconsin, managed by the U.S. Geological Survey (USGS) of the U.S. Department of the Interior. This will foster collaboration, training, and understanding between the two agencies.
- Through its designation as the World Organization for Animal Health (OIE) Collaborating Center for Emerging and Re-Emerging zoonoses, HHS/CDC is planning to work with our partner agency, USDA, and its OIE Collaborating Center, on international training in foreign animal and zoonotic diseases.
- Through our GDD Center in Thailand, HHS/CDC/NCZVED is bringing together the Bureau of Epidemiology at the Thai Ministry of Health and the Division of Livestock Diseases in the Thai Ministry of Agriculture to develop a response plan for outbreaks of zoonotic diseases.

2. **In the CDC report entitled 'Advancing the Nation's Health: A Guide to Public Health Research Needs, 2006-2015' one of the research needs identified is the need to conduct studies to improve diagnostics for the early detection and surveillance of zoonotics in animals that precede human infection, what is the CDC doing to advance this area of research? Are these methods being developed using wild animal populations? Please describe the CDC's overseas efforts to improve wildlife surveillance.**

The bulk of HHS/CDC's work in this area is directed towards specific pathogens that pose a high public health risk rather than to zoonoses generally. Specific projects include the following:

- HHS/CDC invests in ArboNET, an enhanced surveillance system for human and animal diseases operated in collaboration with USDA and other partners, which is designed to monitor the occurrence of arboviral infections in the United States, including West Nile virus (WNV);
- HHS/CDC staff on the ground in Nairobi worked to improve the diagnostic capabilities for Rift Valley fever (RVF) within the Department of Veterinary

Services of the Kenyan Ministry of Livestock and Fisheries Development during the recent RVF outbreak in East Africa. This same diagnostic capacity can serve to identify the RVF virus in wildlife, should such samples be available; and

- Labs funded by HHS/CDC in other countries have projects focused on the diagnosis of zoonoses, such the diagnosis of influenza in animal (avian) populations, including wild birds. For example, HHS/CDC has an active surveillance activity for influenza in wild birds in Guatemala, which involves partners such as the national Governments of Central America and Panamá, the Gorgas Memorial Institute in Panamá City and the Smithsonian Tropical Research Institute on Barro Colorado Island in the Panamá Canal.

Internationally, except for the focused activities described above, HHS/CDC has not routinely assisted foreign Governments to improve their capacity to track zoonotic disease in wildlife. Rather, we have largely concentrated our efforts on providing support for emergencies or outbreak situations that involve zoonotic diseases, such as the Marburg virus in Uganda and the Ebola virus in the Democratic Republic of Congo, both in 2007. In such situations, HHS/CDC deploys staff to the affected country (sometimes in conjunction with USAID or USDA) to assist in the detection of zoonotic diseases in animals and provide technical assistance during the response. Additionally, HHS/CDC staff stationed abroad for other purposes have been pivotal in the detection of zoonotic diseases. For example, the HHS/CDC Global AIDS program in Nigeria, who help impement the President's Emergency Plan for AIDS Relief, played a critical role in the diagnosis of the first human case of avian influenza (H5N1) in sub-Saharan Africa in 2006.

With the establishment of CDC's National Center for Zoonotic, Vector-Borne and Enteric Diseases (NCZVED) with its broader mandate to more directly include zoonotic diseases, CDC may move in the direction of more active international participation in improving animal surveillance (domestic, wild and feral) for zoonotic diseases, as well as high-risk human populations that frequently come into intense contact with animals (such as back-yard flock/herd owners, abattoir workers, bush meat hunters, game wardens, etc).

Question#:	1
Topic:	partnerships
Hearing:	Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Primary:	The Honorable Daniel K. Akaka
Committee:	HOMELAND SECURITY (SENATE)

Questions and Responses for the Record for Kimothy Smith

Question: As we will hear during the second panel witness testimony, the non-governmental community is also formulating new and novel ways to track not only human but also animal health and emerging disease. Dr. Smith, what is your Agency doing to partner with other, non-governmental organizations such as the International Species Information System in development of its Zoological Information Management System?

What are your agencies doing to partner with and support ISIS-ZIMS or other organizations to take advantage of their data collection and surveillance activities?

Response:
NBIS is mounting an ongoing effort to identify and include non-governmental organizations that could provide useful information to the system and that may also benefit from NBIS's products. As an example, the Directors of the National Center for Foreign Animal and Zoonotic Disease Defense (FAZD) and the National Center for Food Protection and Defense (NCFPD), oversee the National Bio-Surveillance Integration System (NBIS) Science Advisory Working Group that includes the Wildlife Conservation Society. Also, the NBIS 2.0 IT system collects a very wide source of public data feeds for analysis (greater than 300) that includes a number of non-governmental sources.

In the particular case of ISIS-ZIMS, NBIS has made the decision not to provide support to the system at this time due to its immaturity, as well as confidentiality and international participation issues.

Question#:	2
Topic:	success
Hearing:	Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Primary:	The Honorable Daniel K. Akaka
Committee:	HOMELAND SECURITY (SENATE)

Question: How do you define success for NBIS and have you established any benchmarks for its implementation?

Response:
The National Biosurveillance Integration Center's (NBIC) definition of success is: "As a result of the pursuit of NBIC's mission and the provision of a Biosurveillance Common Operating Picture (BCOP), a valid biological alert is issued to the National Operations Center (NOC) by NBIC or by a Member Agency and situational awareness is provided to selected decision makers until the incident is resolved."

NBIS will be fully operational by September 30, 2008, as per the statutory mandate found in the newly created section 316 of the Homeland Security Act, as added by section 1101 of the Implementing Recommendations of the 9/11 Commission Act of 2007. (P.L.110-53). To support this effort, our high level benchmarks (work break down structure) are as follows:

Question#:	2
Topic:	success
Hearing:	Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Primary:	The Honorable Daniel K. Akaka
Committee:	HOMELAND SECURITY (SENATE)

WBS	Task Name
1	Data
1.1	Planning
1.2	Requirements, Sources and Standards
1.3	Display and Products
1.4	Analyze
2	Information Technology
2.1	Equipment
2.2	Deployment
2.3	C&A/ATO
2.4	Training
2.5	Test & Evaluation
2.6	O&M
2.7	O&M Development and Data Ingestion
2.8	HSIN Development
3	Outreach
3.1	Engagement Plan
3.2	Visit Ops Centers
3.3	POCs/SMEs Accessible to NBIC
3.4	Agreements
3.5	BCOP, Product Access, HSIN
3.6	Consortium
4	Operations
4.1	SOPs
4.2	CONOPS
4.3	Organization
4.4	Mission
4.5	Science and Tools Planning
4.6	Training
5	Resources
5.1	Finance
5.2	Human Capital
5.3	Facilities
6	Policies and Plans
6.1	Authorities
6.2	Privacy, HIPPA, PCII, PII, Proprietary
6.3	Governance
6.4	S&T
6.5	SCC/GCC Engagement
6.6	Legislative Affairs

An example of a specific benchmark under 3.1, Engagement Plan, would be as follows:

WBS	% Complete	Task Name
3.1.1	100%	IC (Initial Call) by Dir. Myers w/USDA

Question#:	3
Topic:	information
Hearing:	Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Primary:	The Honorable Daniel K. Akaka
Committee:	HOMELAND SECURITY (SENATE)

Question: Your program collects information on notable human health events. To what extent does it address zoonotic disease or diseases that originate in non-agricultural animals?

Response: To take a step back, NBIS's vision and mission is broader than just human health events:

> *NBIC Vision Statement:* A national biological situational awareness capability with a global view to protect the United States and its interests.
>
> *NBIC Mission Statement:* The National Biosurveillance Integration System provides situational awareness and facilitates early recognition of biological events, to include natural disease outbreaks, accidental or intentional use of biological agents, and emergent biohazards through the acquisition, integration, analysis and dissemination of information from existing human disease, food, agriculture, water, meteorological, and environmental surveillance systems and relevant threat and intelligence information.

Since a number of serious diseases spring from a zoonotic origin (e.g. H5N1 (i.e. Avian Influenza or "Bird Flu"), NBIS places a high priority on analyzing the data it is collecting in this arena and is looking for new sources of data. One of our Federal member agencies is the Department of Interior, which is able to provide information on wildlife mortality events in the United States. This information can then be used to identify trends in wildlife disease outbreaks, document geographic expansion of disease locations, and rapidly distinguish new disease threats.

Question#:	4
Topic:	new health threats
Hearing:	Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Primary:	The Honorable Daniel K. Akaka
Committee:	HOMELAND SECURITY (SENATE)

Question: It is commendable that there are a number of global disease surveillance mechanisms being used to provide early warning to health professionals about new health threats. However, I am concerned that they are somewhat fragmented. Can you tell me what is being done to better integrate all of these separate data steams so that the information in them can be more easily evaluated?

Response: As per NBIC's Vision and Mission statements the Center is dedicated to integrating all of these separate data streams, evaluating them, and providing a biological situational awareness capability. The NBIS 2.0 IT system currently collects a number of public data feeds for analysis (greater than 300) including foreign oriented sources such as ARGUS. In addition, relevant global data sources are currently reviewed by NBIC (e.g., DOD-GEIS) and others will be integrated into the IT system as appropriate.

Question#:	5
Topic:	emerging diseases
Hearing:	Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Primary:	The Honorable Daniel K. Akaka
Committee:	HOMELAND SECURITY (SENATE)

Question: Until now, many of these surveillance systems have been disease-specific. How do NBIS, GEIS, the GDD program and others reach beyond specific diseases and monitor and identify unknown or emerging diseases more broadly?

Response: Routine monitoring of open source reporting provides opportunities for early identification of biological incidents *before* diagnoses are made. When an incident is determined to have unusual epidemiologic characteristics for the human, animal, or plant population affected, the NBIC disseminates situational awareness reports to the NBIS interagency community via emailed reports and posting to the Biosurveillance Common Operating Picture (BCOP).

Additional preliminary assessments of probable causes and information validity are made via interagency cross-domain analyst collaboration when a situation is of particular concern due the possibility of a serious spreading disease having a significant impact on human, animal, or crop health or trade. This is an iterative process that results in continually detailed and refined reporting as situations develop.

Question#:	6
Topic:	non-agricultural
Hearing:	Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Primary:	The Honorable Daniel K. Akaka
Committee:	HOMELAND SECURITY (SENATE)

Question: Can you tell me how your program incorporate the animal health communities, specifically, the non-agricultural communities, in order to identify emerging zoonotic diseases?

Response: Currently, we identify emerging animal diseases primarily through the monitoring of open-source websites. Informal communications may also occur between NBIC staff and contacts within organizations that specialize in both wild and domestic animal health issues (e.g. USGS, CEAH, and AVMA).

Question#:	7
Topic:	international
Hearing:	Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Primary:	The Honorable Daniel K. Akaka
Committee:	HOMELAND SECURITY (SENATE)

Question: While the Food and Agriculture Organization (FAO) and the World Organization for Animal Health (OIE) are responsible for monitoring outbreaks in animals, their focus seems to be on agricultural animals. FAO is concerned with food safety, while the OIE is responsible for trade. The World Health Organization focuses on human public health. There is no single organization responsible for emerging diseases, particularly those that jump to humans from animals. What do you believe should be done within the international community to better address these zoonotic diseases on a more regular basis?

Response: The sharing of timely information among international organizations is critical. Ideally, there should be one place where the information on animal health can be aggregated and analyzed. To that end, the FAO and the OIE jointly operate the Crisis Management Center for Animal Health. The Crisis Management Center enables the FAO and OIE to share and analyze information in a timely manner. USAID provided $38 million in FY07 for avian influenza, including financial support to the Crisis Center. These organizations, along with WHO, have greatly increased their cooperation and collaboration to prevent, detect, or respond to avian influenza outbreaks in animals as well as a potential human avian influenza pandemic.

Question#:	8
Topic:	internet
Hearing:	Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Primary:	The Honorable Daniel K. Akaka
Committee:	HOMELAND SECURITY (SENATE)

Question: What role do you believe moderated internet newsgroups like ProMED-mail can play in global disease surveillance and how might such newsgroups supplement or complement other surveillance efforts?

Are there efforts to either expand the use of ProMED-mail or to establish similar internet newsgroups for global disease surveillance?
*Note: ProMED-mail – the Program for Monitoring Emerging Diseases – is an internet-based reporting system dedicated to rapid global dissemination of information on outbreaks of infectious diseases and acute exposures to toxins that affect human health, including those in animals and in plants grown for food or animal feed. Electronic communications enable ProMED-mail to provide up-to-date and reliable news about threats to human, animal, and food plant health around the world, seven days a week. ProMED-mail was established in 1994 with the support of the Federation of American Scientist and SatelLife. Since October 1999, ProMED-mail has operated as an official program of the International Society for Infectious Diseases, a nonprofit professional organization with 20,000 members worldwide.

Response: PROMED is one source monitored closely by NBIC's watch officers. NBIC has the unique capability of overlaying this information with intelligence sources to help provide a better understanding of certain events. Moderated internet groups serve a very useful purpose for vetting and disseminating disease information. Users can rely on professional sites for high confidence reporting. NBIC benefits from knowing what is being discussed in the community. There is frequently a period of latency associated with the vetting process, which in some cases makes these sources more of a confirmatory signal than an indicator. In any case, these sites serve as a source of high-confidence reporting.

Question#:	9
Topic:	action triggers
Hearing:	Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Primary:	The Honorable Daniel K. Akaka
Committee:	HOMELAND SECURITY (SENATE)

Question: Surveillance efforts can be constrained by uncertain linkages between data collection, analysis and response. There does not seem to be a doctrine for response. What are the triggers for action by the public health community once information is gathered and a disease threat identified using surveillance systems?

How reliable and timely is information gathered in developing countries for surveillance efforts?

Response: Domestically, triggers are largely set by the states and their public health laws. Internationally, the World Health Organization's International Health Regulations require all WHO Member States, including the United States, to strengthen their ability to detect, respond to, reduce, or eliminate the spread of public health emergencies of international concern (PHEIC), and to report any potential PHEIC in a timely way to the WHO Secretariat. Provisions of the International Health Regulations establish the trigger for determining whether a public health event within a State's territory is a PHEIC that must be notified to the WHO. Once notified, the WHO assesses the information provided and may issue recommendations to affected States regarding measures to be taken to reduce the risk of international spread of disease. NBIS has a unique orientation in that it provides cueing of biological events. That is, NBIS will provide situational awareness of events that are of concern but not yet 100% scientifically verified.

Question#:	10
Topic:	integration
Hearing:	Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Primary:	The Honorable Daniel K. Akaka
Committee:	HOMELAND SECURITY (SENATE)

Question: It is commendable that there are a number of global disease surveillance mechanisms being used to provide early warning to health professionals about new health threats. However, I am concerned that they are fragmented. Can you tell me what is being done to better integrate all of these separate data streams so that the information in them can be more easily evaluated?

Response: As per NBIC's Vision and Mission statements the Center is dedicated to integrating all of these separate data streams, evaluating them, and providing a biological situational awareness capability. The NBIS 2.0 IT system currently collects a number of public data feeds for analysis (greater than 300) including foreign oriented sources such as ARGUS. In addition, relevant global data sources are currently reviewed by NBIC (e.g., DOD-GEIS) and others will be integrated into the IT system as appropriate.

Question#:	11
Topic:	GAINS program
Hearing:	Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Primary:	The Honorable Joseph I. Lieberman
Committee:	HOMELAND SECURITY (SENATE)

Question: In your testimony you state that "One important function of NBIC will be the integration of wildlife biosurveillance information as a potential key early indicator of a possible disease outbreak," and "information networks such as the Global Avian Influenza Network for Surveillance…may prove useful as a very early indicator of a significant bio-event." How would an expansion of the current GAINS program to include other wildlife populations benefit NBIC?

Response: Given that wildlife other than birds can be reservoirs for zoonotic diseases of concern, any extension of GAINS or similar biosurveillance systems beyond wild birds would be of value. NBIC monitors reporting on animal populations (wildlife *and* domestic) for disease outbreaks since these can also serve as sentinel events for disease outbreaks in human or domestic animals.

Questions and Responses for the Record
for Colonel Erickson

CHARRTS No.: SG-08-001
Senate Committee on Governmental Affairs
Hearing Date: October 04, 2007
Subject: Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas

Senator: Senator Akaka
Question: #1

Surveillance Projects

Question. The GAO report states that DOD considers capacity-building to occur as a result of projects that focus on the primary goal of the GEIS program, which is conducting surveillance. How is DOD ensuring that capacity-building continues to occur in the future as a result of its surveillance projects? Do the countries where projects are being conducted have sufficient laboratory capacity to confirm infectious disease outbreaks? If not, how does this affect the projects?

Answer. DOD-GEIS emphasizes development of human capacity, supporting training for host country public health and laboratory personnel in emerging infectious disease detection and response in many developing countries. This allows host countries to assume increasing responsibility for surveillance over time, leading to sustainable, long-term programs. Often, DOD-GEIS initiates programs in countries without sufficient laboratory capacity to confirm infectious disease outbreaks. DOD-GEIS addresses this challenge by developing laboratory infrastructure and human laboratory proficiency in-country, and by linking host country laboratories with other more specialized laboratories that can confirm diagnoses.

Question: #2

Pandemic and Avian Influenza

Question. GEIS received about $39 million in FY06 and $25 million in FY07 in appropriations targeted for pandemic and avian influenza. The infectious disease community is indeed very concerned now about pandemic and avian influenza, but a few years from now a new threat may arise which we cannot foresee today. What steps is DOD taking to ensure that the GEIS program's work on pandemic and avian influenza will contribute to efforts to identify the next "big threat?"

Answer. The Avian Influenza-Pandemic Influenza Congressional appropriations for DOD-GEIS in FY07 were increased from $25M to $40M by the Office of the Assistant Secretary of Defense (Health Affars) in 4th Quarter FY07. As part of the laboratory infrastructure capacity building efforts in support of PI preparedness, DoD has been able to establish full-fledged high containment (BSL-3) laboratory capabilities in Thailand, Korea, Egypt, Peru, Germany, and San Diego. These laboratories can now address other non-influenza highly-infectious pathogens (bacterial or viral). In addition the expansion of the surveillance network to almost 60 countries and 300 sites internationally represents a unique asset of the US government and surpasses the capabilities of any other disease surveillance network worldwide.

CHARRTS No.: SG-08-003
Senate Committee on Governmental Affairs
Hearing Date: October 04, 2007
Subject: Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Witness: Colonel Erickson
Senator: Senator Akaka
Question: #3

Zoonotic/Non-Agricultural Diseases

Question. Your program collects information on notable human health events. To what extent does it address zoonotic disease or diseases that originate in non-agricultural animals?

Answer. Although DOD-GEIS information and surveillance efforts are focused on what may be recognized as "human health events", many of the pathogens implicated are zoonotic in nature and originate from the environment from non-agricultural animals and may also be shared with agricultural animals (e.g. Leptospirosis, Rift Valley fever, Hantavirus, etc.). DOD does not currently possess extensive electronic animal health databases or systems and relies on the USDA and civilian public health offices to handle animal/vector surveillance in the domestic setting. DOD-GEIS and CDC do coordinate on animal surveillance as part of the DOD overseas laboratories' activities, especially for avian influenza. For instance, the NAMRU-3 laboratory in Cairo receives and analyzes bird specimens from various countries in its area of responsibility (such as Ukraine, Egypt, and Kenya). Similar avian surveillance efforts are planned by the USAMRU-K laboratory in Nairobi for the countries of Uganda and Cameroon in FY2008.

Question: #4

Surveillance Projects

Question. It is commendable that there are a number of global disease surveillance mechanisms being used to provide early warning to health professionals about new health threats. However, I am concerned that they are somewhat fragmented. Can you tell me what is being done to better integrate all of these separate data steams so that the information in them can be more easily evaluated?

Answer. DOD-GEIS is aware of several efforts to integrate surveillance data across systems, including programs by US Government agencies, the World Health Organization, academic institutions, and professional societies. For its part, DOD-GEIS coordinates its activities with other organizations that play major roles in infectious disease surveillance. For example, DOD-GEIS coordinates with CDC through a CDC-DOD Working Group focusing on infectious disease surveillance; and with the World Health Organization through the DOD liaison to the World Health Organization in Geneva (a US military physician supported, in part, by DOD-GEIS).

CHARRTS No.: SG-08-005
Senate Committee on Governmental Affairs
Hearing Date: October 04, 2007
Subject: Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Witness: Colonel Erickson
Senator: Senator Akaka
Question: #5

Surveillance Projects

Question. Global disease surveillance cannot be successful without the commensurate laboratory and epidemiological capacity to address these new diseases. An article in the March 2, 2006 issue of Nature by Jean-Paul Chretien and David Blazes argues that we should duplicate the global laboratory network used by the Global Emerging Infections Surveillance and Response System (GEIS) in order to better avert pandemics. What is your view of this proposal? How might such a global network be established? Who do you think should take the lead?

Answer. This article was written by DOD-GEIS staff. DOD-GEIS believes that laboratory and epidemiological capacity for emerging infectious disease surveillance requires strengthening in developing countries, and that the DOD, through its Overseas Laboratories and DOD-GEIS, is addressing this need.

Question: #6

Surveillance Projects

Question. Until now, many of these surveillance systems have been disease-specific. How do NBIS, GEIS, the GDD program and others reach beyond specific diseases and monitor and identify unknown or emerging diseases more broadly?

Answer. DOD-GEIS addresses previously unknown and emerging diseases more broadly by developing laboratory capacity useful for a wide range of infectious diseases, and by improving human capacity to identify, investigate, and respond to epidemics, regardless of cause. DOD-GEIS also develops electronic, rapid-reporting surveillance systems that monitor patient clinical presentations (not just confirmed diagnosis), facilitating detection and monitoring of new diseases that do not yet have established case definitions or laboratory tests.

Question: #7

Zoonotic Diseases

Question. Can you tell me how your program incorporate the animal health communities, specifically, the non-agricultural communities, in order to identify emerging zoonotic diseases?

Answer. This is part of a new effort. There are different levels of participation depending on the lab. This area of focus is expanding as funding and capability are made available. The programs that have been initiated are working through and in cooperation with international wildlife agencies (Wildlife Conservation Society, Universities, etc.) and respective host nation government ministries.

CHARRTS No.: SG-08-008
Senate Committee on Governmental Affairs
Hearing Date: October 04, 2007
Subject: Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Witness: Colonel Erickson
Senator: Senator Akaka
Question: #8

Zoonotic Diseases

Question. While the Food and Agriculture Organization (FAO) and the World Organization for Animal Health (OIE) are responsible for monitoring outbreaks in animals, their focus seems to be on agricultural animals. FAO is concerned with food safety, while the OIE is responsible for trade. The World Health Organization focuses on human public health. There is no single organization responsible for emerging diseases, particularly those that jump to humans from animals. What do you believe should be done within the international community to better address these zoonotic diseases on a more regular basis?

Answer. Most of these efforts are being pursued by civilian university-based researchers, NGOs and other non-profit organizations. Efforts ought to be explored in conjunction with other disease surveillance efforts that are ongoing internationally.

Question: #9

ProMED

Question. ProMED-mail - the Program for Monitoring Emerging Diseases - is an internet-based reporting system dedicated to rapid global dissemination of information on outbreaks of infectious diseases and acute exposures to toxins that affect human health, including those in animals and in plants grown for food or animal feed. Electronic communications enable ProMED-mail to provide up-to-date and reliable news about threats to human, animal, and food plant health around the world, seven days a week. ProMED-mail was established in 1994 with the support of the Federation of American Scientist and SatelLife. Since October 1999, ProMED-mail has operated as an official program of the International Society for Infectious Diseases, a nonprofit professional organization with 20,000 members worldwide. What role do you believe moderated internet newsgroups like ProMED-mail can play in global disease surveillance and how might such newsgroups supplement or complement other surveillance efforts? Are there efforts to either expand the use of ProMED-mail or to establish similar internet newsgroups for global disease surveillance?

Answer. Moderated internet newsgroups like ProMED-mail play an important role in global infectious disease surveillance. DOD-GEIS staff often consults ProMED-mail for information complementary to other surveillance systems. The CDC, Atlanta, GA, has a similar system called the Epidemic Information Exchange or Epi-X. Epi-X is a regulated system with password access and restrictions on the transfer of data and information. DOD-GEIS has been an active participant in Epi-X and has been working with the CDC's Epi-X staff to extend this system within the DOD medical community. Expanded internet newsgroups could be helpful in extending a global surveillance net and by providing independent validation of reports posted on other newsgroups. However, expansion of Internet news groups can lead to too much unvalidated information being exchanged. Evaluating unvalidated information could consume an excessive amount of resources while identifying few legitimate concerns.

CHARRTS No.: SG-08-010
Senate Committee on Governmental Affairs
Hearing Date: October 04, 2007
Subject: Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Witness: Colonel Erickson
Senator: Senator Akaka
Question: #10

Field Epidemiology Training Programs / Integrated Disease Surveillance and Response

Question. How can the Field Epidemiology Training Programs and the Integrated Disease Surveillance and Response program be used to help other countries implement the new International Health Regulations being promulgated by WHO? What about the GEIS program?

Answer. The new International Health Regulations call for national core capacity strengthening and global cooperation for public health emergencies of international concern. DOD-GEIS helps countries implement the new International Health Regulations by improving laboratory and human capacity for emerging infectious disease surveillance and response, and by coordinating with other agencies that play major roles in global infectious disease surveillance, such as CDC and the World Health Organization.

Question: #11

August 2001 GAO Repot on Global Health

Question. In an August 2001 report entitled, "Global Health: Challenges in Improving Infectious Disease Surveillance Systems," GAO observed that weaknesses in transportation and communications infrastructure in developing countries impair surveillance in these countries. Do you believe that this is still the case and if so, how does this impact the sustainability of your efforts?

Answer. Weaknesses in transportation and communications infrastructure continue to impair surveillance in developing countries. Where these deficiencies are great, there remains a persistent threat to the sustainability of all surveillance efforts. While improving transportation and communication infrastructure is not part of the DOD-GEIS mission, DOD-GEIS supports several approaches to address these challenges. These include field-use diagnostic tests that can be applied in remote areas without sophisticated laboratory capabilities or highly skilled laboratory personnel, ways of preserving biological specimens during transport to laboratories, and surveillance systems that use cell-phone networks and internet for communicating information to central analysis hubs.

Question: #12

Emerging Diseases

Question. What role do private health care providers play in disease surveillance in developing countries? Do they coordinate with government health officials to report emerging diseases?

Answer. In many developing countries, private practitioners provide healthcare to a significant portion of the population. Coordination with the government for disease surveillance varies widely. Most DOD-GEIS surveillance activities are based in the public sector, in partnership with health or defense ministries.

CHARRTS No.: SG-08-013
Senate Committee on Governmental Affairs
Hearing Date: October 04, 2007
Subject: Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas
Witness: Colonel Erickson
Senator: Senator Akaka
Question: #13

Surveillance Projects

Question. Surveillance efforts can be constrained by uncertain linkages between data collection, analysis and response. There does not seem to be a doctrine for response. What are the triggers for action by the public health community once information is gathered and a disease threat identified using surveillance systems? How reliable and timely is information gathered in developing countries for surveillance efforts?

Answer. Triggers for public health action once surveillance identifies a disease threat vary. The new International Health Regulations include a decision algorithm for countries to use when surveillance detects an event that may constitute a public health emergency of international concern. Some countries have developed algorithms for epidemics they commonly face, such as responses to malaria and dengue that are tied to surveillance data. Since surveillance information gathered in developing countries often is not timely or based on definitive laboratory testing, initial necessary actions may include rapid assessment with reliable laboratory tests and empirical control measures (such as quarantine of people who were exposed).

Question: #14

Surveillance Projects

Question. It is commendable that there are a number of global disease surveillance mechanisms being used to provide early warning to health professionals about new health threats. However, I am concerned that they are fragmented. Can you tell me what is being done to better integrate all of these separate data streams so that the information in them can be more easily evaluated?

Answer. DOD-GEIS is aware of several efforts to integrate surveillance data across systems, including programs by US Government agencies, the World Health Organization, academic institutions, and professional societies. For its part, DOD-GEIS coordinates its activities with other organizations that play major roles in infectious disease surveillance. For example, DOD-GEIS coordinates with CDC through a CDC-DOD Working Group focusing on infectious disease surveillance; and with the World Health Organization through the DOD liaison to the World Health Organization in Geneva (a US military physician supported, in part, by DOD-GEIS).

Question: #15

August 2001 GAO Repot on Global Health

Question. In its report, GAO notes that none of your agencies tracked obligations for infectious disease surveillance capacity-building. This concerns me. Why do you not track obligations for these surveillance activities?

Answer. DOD-GEIS tracks all of its obligations, but views surveillance and capacity-building as goals that usually are achieved simultaneously by its surveillance projects and programs, and does not attempt to parse the two goals when tracking obligations. For example, when DOD-GEIS obligates funds to develop influenza surveillance capabilities in a host country Ministry of Health, the project addresses both goals--surveillance, through generation of new information on circulating influenza viruses and biological specimens that could become vaccine strain candidates; and capacity--building, through development of in-country laboratory and human capabilities to conduct and sustain the surveillance efforts.

Questions for the Record Submitted to
USAID Bureau for Global Health Assistant Administrator
Dr. Kent R. Hill by
Senator Daniel K. Akaka
U.S. Senate Committee on Homeland Security
and Governmental Affairs
Subcommittee on Oversight of Government Management, the Federal
Workforce, and the District of Columbia
October 4, 2007

Question # 1:

Your program collects information on notable human health events. To what extent does it address zoonotic disease or diseases that originate in non-agricultural animals?

Answer:

USAID has programs that address zoonotic diseases, such as HIV/AIDS and Avian Influenza. These programs were created because they are major threats to global health -- not solely because they are zoonotic in nature. At this time, USAID does not have a program that specifically focuses on zoonotic diseases as a special category of infectious disease.

However, we are supporting programs that are building developing country capacity to address infectious diseases of public health importance, which certainly includes zoonotic diseases. For example, our support to field epidemiology training programs (FETPs) is boosting the number of public health practitioners in developing countries who are equipped with

the epidemiological skills essential to address the disease priorities of their country -- whether they are zoonotic or non-zoonotic.

USAID is also collaborating with the Centers for Disease Control and Prevention (CDC) to develop a model program in Nigeria that will be the first in Africa to integrate training in veterinary medicine, laboratory training, and field epidemiology. This model will improve the capacity of the veterinary community in Africa to assist in the response to diseases of animal origin that pose threats to human health, such as avian influenza.

Finally, USAID is also providing support to the Wildlife Conservation Society to establish the Global Avian Influenza Network for Surveillance (GAINS). This innovative network provides critical surveillance information on wild birds regarding the H5N1 virus. GAINS, which is also supported by CDC and the Food and Agriculture Organization (FAO), maintains a data base that makes the data available to anyone who wishes to access it. This level of information sharing is critical for health officials around the world to be able to track and respond to disease threats derived from non-agricultural animals.

Questions for the Record Submitted to
USAID Bureau for Global Health Assistant Administrator
Dr. Kent R. Hill by
Senator Daniel K. Akaka
U.S. Senate Committee on Homeland Security
and Governmental Affairs
Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia
October 4, 2007

Question # 2:

It is commendable that there are a number of global disease surveillance mechanisms being used to provide early warning to health professionals about new health threats. However, I am concerned that they are somewhat fragmented. Can you tell me what is being done to better integrate all of these separate data steams so that the information in them can be more easily evaluated?

Answer:

In Africa, USAID has been a major contributor to the Integrated Disease Surveillance and Response program (IDSR). This World Health Organization (WHO) sponsored activity is working with countries to integrate vertical disease surveillance programs into routine surveillance systems, as well as expand the range of surveillance to incorporate more diseases. The process is complicated by the fact that many disease specific programs require their own surveillance component in order to meet the timeliness requirements of their interventions. An example of this is the polio eradication program. It has polio-specific reporting requirements for

surveillance that most routine systems are not able to meet. Therefore, full integration into a program such as IDSR may inhibit progress for the polio program as it would slow the flow of critical information. In cases such as this, vertical disease surveillance activities are necessary and full integration into the routine system may be counter-productive.

In other cases, disease specific programs are used to support capacity building that is necessary for the development of integrated surveillance systems. These programs bring needed donor financial resources that are not usually available for routine surveillance programs. For example, the Global Fund to Fight AIDS, Tuberculosis and Malaria (Global Fund) has designated capacity building as an important part of its work. The Global Fund is able to attract resources that would not otherwise be available for routine surveillance systems. The Global Alliance for Vaccines and Immunization (GAVI) is also beginning to focus more attention on capacity building. This is a positive trend as these programs have the resources to make significant improvements in national routine surveillance capacity.

Questions for the Record Submitted to
USAID Bureau for Global Health Assistant Administrator
Dr. Kent R. Hill by
Senator Daniel K. Akaka
U.S. Senate Committee on Homeland Security
and Governmental Affairs
Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia
October 4, 2007

Question #3:

Global disease surveillance cannot be successful without the commensurate laboratory and epidemiological capacity to address these new diseases. An article in the March 2, 2006 issue of Nature by Jean-Paul Chretien and David Blazes argues that we should duplicate the global laboratory network used by the Global Emerging Infections Surveillance and Response System (GEIS) in order to better avert pandemics. What is your view of this proposal? How might such a global network be established? Who do you think should take the lead?

Answer:

As the authors of the article indicate, developing countries often lack basic laboratories and epidemiologic capabilities, and as a result, infectious disease surveillance is weak in some of the countries that need it most. I agree that laboratories overseas need to be strengthened to improve detection and response to emerging infections, and Department of Defense (DoD) labs have played a strong role in detection of avian influenza around the world. However, the proposed model suggests an extremely limited role for host countries. As the authors point out, U.S. military laboratories overseas are

subject to diplomatic relations. Furthermore, they require indefinite financial support from the USG to fulfill their mission of protecting U.S. military personnel. As a result, they are not good platforms for sustained epidemic detection and response in developing countries. A more appropriate model would integrate laboratories into an existing national surveillance system and foster country ownership and support. The only group in a position to do this on a global basis is the World Health Organization (WHO).

USAID provides support to WHO/Lyon to strengthen overseas laboratories, improve quality assurance, and increase diagnostic capacity for epidemic prone diseases in Africa and the Near East. However, to date, donors have not provided an adequate level of funding to WHO to support a large-scale laboratory initiative that would build sustainable capacity in developing countries to improve epidemic preparedness.

Questions for the Record Submitted to
USAID Bureau for Global Health Assistant Administrator
Dr. Kent R. Hill by
Senator Daniel K. Akaka
U.S. Senate Committee on Homeland Security
and Governmental Affairs
Subcommittee on Oversight of Government Management, the Federal
Workforce, and the District of Columbia
October 4, 2007

Question # 4:

Until now, many of these surveillance systems have been disease-specific. How do NBIS, GEIS, the GDD program and others reach beyond specific diseases and monitor and identify unknown or emerging diseases more broadly?

Answer:

Since these programs are not USAID programs, it is somewhat difficult to comment on them specifically. However, it is my understanding that programs like NBIS, GEIS, and GDD are not disease specific but do cover a wide range of surveillance activities and diseases. It is the position of USAID that a critical contribution to the effort to monitor and identify unknown or emerging diseases is the ability to strengthen developing country capacity in the area of surveillance and epidemiology. The front lines of any global disease detection network will always be the health workers who have direct interface with the public. In a world as closely connected as ours is today, the ability of any country to protect its

population from infectious disease is directly dependent on the capacity of these workers to detect, identify, report and respond to infectious diseases. A major weakness in this global network is the developing world where a limitation in resources and trained health workers poses a danger to the entire world. It, therefore, becomes the responsibility of any disease detection network to address this weakness by building sustainable capacity in developing countries to detect and respond to deadly pathogens on a local scale before they become global threats.

Questions for the Record Submitted to
USAID Bureau for Global Health Assistant Administrator
Dr. Kent R. Hill by
Senator Daniel K. Akaka
U.S. Senate Committee on Homeland Security
and Governmental Affairs
Subcommittee on Oversight of Government Management, the Federal
Workforce, and the District of Columbia
October 4, 2007

Question # 5:

Can you tell me how your program incorporates the animal health communities, specifically, the non-agricultural communities, in order to identify emerging zoonotic diseases?

Answer:

Creating synergies between the animal health sector and the human health sector is essential for a viable strategy to identify and respond to emerging zoonotic diseases. Within the animal sector, the critical areas of concern are the agricultural and non-agricultural communities. While these sectors are closely related and difficult to differentiate, USAID has supported the non-agricultural community through its avian influenza (AI) program by strengthening wildlife surveillance and tracking systems to determine the exact role that wildlife plays in the transmission of this zoonotic disease.

USAID supports the Wildlife Conservation Society to develop the Global Avian Influenza Network for Surveillance (GAINS). As of October

2007, the GAINS network is active in 14 countries in Latin America and the Caribbean, 11 in Africa, 10 in Asia, and in Ukraine. GAINS activities include wild bird mortality investigations, AI sampling, wild bird censuses, illegal wild bird trade surveillance, and monitoring of migratory bird movements. During its first year, the GAINS program also trained more than 800 people worldwide in wild bird handling, sampling, and data collection related to controlling the spread of H5N1 AI.

Through GAINS, more than 20,000 samples have been collected for H5N1 analysis and census data from over 105 million bird observations are available through an open database and mapping system. In addition, GAINS has access to surveillance data throughout Africa, Asia and Latin America through the French Center for International Cooperation in Agronomy Research for Development (CIRAD), Percy Fitzpatrick Institute of African Ornithology in Southern Africa, Tanzania Bird Atlas, Global Registry of Migratory Species, Wetlands International, and the United Nations Food and Agriculture Organization. Data gathered in surveillance activities increase the availability of scientific information about the H5N1 AI virus, including whether genetic changes which could increase its threat to humans have occurred. The data are also applied to support early-warning systems, which help notify at-risk countries about the movement of AI and

its potential spread. For example, GAINS releases confirmation of highly pathogenic AI-positive test results within 24 hours so alerts can be disseminated.

USAID is also working with the non-agricultural community to identify and control other zoonotic diseases through the management of wildlife and domestic animals. The USAID Global Livestock Collaborative Research Support Project (CRSP) is investigating disease transmission among wildlife, livestock and people in the Great Ruaha River watershed in Tanzania. This multidisciplinary project is being implemented by the University of California Davis, the Wildlife Conservation Society, and Sokoine University of Agriculture and is designed to determine the prevalence and transmission ecology of zoonotic diseases, including bovine tuberculosis, brucellosis and water-borne pathogens in wildlife, livestock, and pastoral and agropastoral communities; assess the effects of river water management and water quality on the presence, abundance, and severity of disease impacts; assess how water management and disease affect the health and economic livelihoods of agropastoral and pastoral communities in the watershed; and strengthen the zoonotic disease curriculum and research capacity of the Faculty of Veterinary Medicine at Sokoine University of Agriculture in Morogoro, Tanzania.

Questions for the Record Submitted to
USAID Bureau for Global Health Assistant Administrator
Dr. Kent R. Hill by
Senator Daniel K. Akaka
U.S. Senate Committee on Homeland Security
and Governmental Affairs
Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia
October 4, 2007

Question # 6:

While the Food and Agriculture Organization (FAO) and the World Organization for Animal Health (OIE) are responsible for monitoring outbreaks in animals, their focus seems to be on agricultural animals. FAO is concerned with food safety, while the OIE is responsible for trade. The World Health Organization focuses on human public health. There is no single organization responsible for emerging diseases, particularly those that jump to humans from animals. What do you believe should be done within the international community to better address these zoonotic diseases on a more regular basis?

Answer:

The international responsibility for all diseases that threaten human health rests with the World Wealth Organization (WHO). WHO has the capacity to address zoonotic diseases that infect humans through their infectious disease unit. When these diseases are confined to the animal sector, but pose a potential threat to humans, both WHO and the Food and Agriculture Organization (FAO) need to be involved. The working relationships between the animal and human health sector at this point have

not been fully defined but substantial progress has been achieved at bringing the two organizations together. For example:

- The World Organization for Animal Health (OIE), FAO, and WHO joined forces in 2006 to launch the Global Early Warning and Response System (GLEWS) to predict and respond to animal diseases worldwide so that potential zoonoses could be more aptly identified and controlled before accelerating into major human health threats;
- OFFLU, the joint FAO/OIE animal influenza network designed in 2005 to interface with the existing WHO influenza network focused solely on human health, acts as a network of expertise to support international efforts to monitor and control avian influenza in poultry and other bird species;
- The Crisis Management Center (CMC), another FAO/OIE venture [sponsored by USAID and the U.S. Department of Agriculture (USDA)], facilitates rapid response to avian influenza animal outbreaks worldwide, integrated with human surveillance efforts by WHO; and
- OIE, emphasizing the importance of both domestic animal and livestock disease surveillance, plans to release a software tool in 2007 called Performance, Vision and Strategy (PVS) for nations to evaluate

their own veterinary services against OIE's international standards of quality and evaluation.

In order to further develop our concept of how zoonotic diseases should be addressed within the international community, USAID has commissioned the Institute of Medicine at the National Academies of Science to convene an expert panel to explore this issue and make recommendations as to how best to deal with diseases of animal origin. The Institute of Medicine (IOM) will convene an expert consensus committee in late 2007 to consider the challenge of achieving sustainable global capacity for surveillance and response to emerging diseases of zoonotic origin, such as Severe Acute Respiratory Syndrome (SARS) and avian influenza. The committee will review the emergence and spread over the last several decades of a diverse range of agents of zoonotic origin. They will study the causes underlying this growing phenomenon, trends in these factors, and the implications for long-term domestic and international development and security. The evolving nature, extent, and risks of animal and human interactions will be assessed with respect to recent infectious disease events of international significance, such as H5N1 influenza. Historic public health responses to emergent zoonotic diseases will be assessed along with lessons learned that can be applied in anticipation of future threats of this type.

Conclusions will be considered with respect to the issue of the balance between resources for emergency response to newly appreciated threats and for establishing sustainable global capacity for early detection and characterization of unknown threats and for effective response and mitigation. The committee will consider recommendations to international priorities for human and animal health system coordination and strengthening to achieve a sustainable and integrated capacity across both realms for timely identification of and response to zoonotic diseases. The benefits of potential international agreements addressed to animal movements for commercial purposes will also be explored, as well as issues of coordination between governmental agencies and with other relevant organizations.

The recommendations of this committee will be published and specific briefings for Congress and other relevant groups will be provided. It is envisioned that these recommendations will be available in late 2008.

Questions for the Record Submitted to
USAID Bureau for Global Health Assistant Administrator
Dr. Kent R. Hill by
Senator Daniel K. Akaka
U.S. Senate Committee on Homeland Security
and Governmental Affairs
Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia
October 4, 2007

Question # 7:

What role do you believe moderated internet newsgroups like ProMED-mail can play in global disease surveillance and how might such newsgroups supplement or complement other surveillance efforts? Follow-up: Are there efforts to either expand the use of ProMED-mail or to establish similar internet newsgroups for global disease surveillance?

Answer:

Moderated internet groups can play an important role in sharing disease information; however, ultimately their effectiveness is limited by each country's local and national capacity to feed relevant and timely information into the network.

A critical aspect of disease surveillance is getting information to people who need to take action. The internet can be an important tool in developed countries for communication of critical information to health authorities, particular since it can be used to quickly share information.

However, the internet relies on communications technologies and infrastructure that is limited in developing settings, where many of the newly

emerging disease threats occur. As a result, health authorities in many countries cannot rely solely on the internet to provide them with information to identify a problem as it emerges and organize a rapid and effective response. Additionally, if the frontline health workers on whom we rely to detect and report infectious diseases do not have immediate access to the network, then the network itself is essentially ineffective as a tool for rapid response.

While the improvement in communications technologies and infrastructure in all developing countries is a long-term process, we can immediately work to address other limitations and gaps in disease surveillance overseas. For example, we support the expansion of applied public health training in developing countries to prepare local and national public health practitioners to detect and respond to deadly pathogens on a local scale before they become global threats.

Questions for the Record Submitted to
USAID Bureau for Global Health Assistant Administrator
Dr. Kent R. Hill by
Senator Daniel K. Akaka
U.S. Senate Committee on Homeland Security
and Governmental Affairs
Subcommittee on Oversight of Government Management, the Federal
Workforce, and the District of Columbia
October 4, 2007

Question # 8:

How can the Field Epidemiology Training Programs and the Integrated Disease Surveillance and Response program be used to help other countries implement the new International Health Regulations being promulgated by WHO?

Answer:

Currently, there is no comprehensive global public health surveillance system. To address this issue, the International Health Regulations (IHR) (2005) include an extensive checklist of the minimum "core capacity" requirements for surveillance and response that must be present and functioning in member states within five years after the entry into force (June 2007). For example, at the local community level, countries must have the capacity to detect events involving disease above expected levels and be able to report all available essential information immediately to the appropriate level of healthcare response. At the intermediate level, they must be able to confirm the status of reported events and support or implement

additional control measures. At the national level, they must be able to assess all reports of urgent events within 48 hours. These are only a few examples of the capacities outlined in the IHR(2005), but they demonstrate that in order to develop a global surveillance system, which will be stable and reliable over time, significant additional technical support and resources will be required from the international community.

Through our interactions and discussions with the World Health Organization (WHO), we have determined that the most critical aspect for countries to meet the core capacities is through the development of trained epidemiologists in developing countries, where many of the newly emerging infectious disease threats occur. Field Epidemiology Training Programs (FETPs) can help meet this need by building capacity *within* countries to promote better management of surveillance systems, more appropriate data collection, analysis and interpretation, and more effective outbreak response.

The five FETPs that currently exist in Africa have trained hundreds of African epidemiologists, who are an important human resource in local and national efforts to detect and respond to infectious diseases. Graduates fill positions of increasing responsibility and decision making authority and many have risen to top leadership positions in ministries of health. They have had a significant impact on the design, establishment and maintenance

of disease surveillance systems. For example, when WHO launched Integrated Disease Surveillance and Response (IDSR) in 1999 in the African region, FETP graduates were recruited into key positions and greatly contributed to its success in FETP-host countries. Graduates have set up cross-border surveillance systems and have played key roles in the investigation and response to emerging epidemics in their countries, including Ebola in Uganda and Rift Valley Fever in Kenya.

The success of this model has created a demand for FETPs in other African countries, and several are currently working to develop their own programs, including Ethiopia, Tanzania and Nigeria, among others. USAID, in collaboration with the Centers for Disease Control and Prevention (CDC), is providing direct support to a number of these national FETPs. However, to date, Africa lags far behind the rest of the world in the expansion of the FETP model. While there are over 30 FETPs worldwide, there are only five in Africa. Without additional investment in building human resource capacity in this area, African countries will be severely limited in their ability to build and use disease surveillance systems and will be unable to meet the IHR(2005) requirements. Thus, they will remain highly vulnerable to the threats of emerging and reemerging infectious diseases and indefinitely dependent on donor resources.

Questions for the Record Submitted to
USAID Bureau for Global Health Assistant Administrator
Dr. Kent R. Hill by
Senator Daniel K. Akaka
U.S. Senate Committee on Homeland Security
and Governmental Affairs
Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia
October 4, 2007

Question # 9:

In an August 2001 report titled, "Global Health: Challenges in Improving Infectious Disease Surveillance Systems," GAO observed that weaknesses in transportation and communications infrastructure in developing countries impair surveillance in these countries. Do you believe that this is still the case and if so, how does this impact the sustainability of your efforts?

Answer:

I believe this is still the case, and this is an important issue. Resource constraints prevent us from fully addressing weaknesses in transportation and communications infrastructure, and these remain significant challenges in much of the developing world. Alleviating Poverty is one of the challenges we have to work with as we seek to improve surveillance in resource limited settings. As long as donor resources are unstable and national budgets for health are inadequate, these problems will continue to make the development of sustainable health systems very difficult.

Questions for the Record Submitted to
USAID Bureau for Global Health Assistant Administrator
Dr. Kent R. Hill by
Senator Daniel K. Akaka
U.S. Senate Committee on Homeland Security
and Governmental Affairs
Subcommittee on Oversight of Government Management, the Federal
Workforce, and the District of Columbia
October 4, 2007

Question # 10:

What role do private health care providers play in disease surveillance in developing countries? Do they coordinate with government health officials to report emerging diseases?

Answer:

The role of the private health sector in reporting and responding to infectious disease is extremely important. In many countries the private sector makes up the front line health workers who are the first to detect unusual health events. Given the tremendous variation in the private sector across developing countries, it is difficult to generalize. However, there are some common issues. For example, often private practitioners do not have an adequate level of training to diagnose specific diseases. The symptoms of many infectious diseases are similar and it is difficult to identify the specific disease based solely on clinical presentation. Private practitioners often do not have access to laboratories to confirm diagnosis. This is a common problem in many developing countries that inhibits both the private

and public sector. In some countries the legal mandate for reporting diseases does not exist or is not enforced and so compliance with reporting requirements can significantly vary.

The private non-profit sector, which includes many international and domestic non-governmental organizations (NGOs), is often an excellent source for reporting of disease outbreaks. They usually have very good contacts within the community and are often the first to detect an unusual event. This sector has played a critical role in the early detection and response to a number of disease outbreaks in developing countries and remains a valuable asset to those countries. However, special training and additional resources are needed to take full advantage of what the NGO community has to offer.

An often overlooked sector with regard to disease detection is the media. In many countries the first group to become aware that something unusual is taking place is the media. Many countries are now closely scanning the press and broadcast media for signs of unusual disease events. The role of the media in disease detection is still somewhat unstructured, but surveillance experts agree that this is a valuable source of information which cannot be overlooked.

Finally, I would point to the community itself as a critical source of information. USAID is investing in a participatory disease surveillance system in Indonesia for avian influenza that trains community workers to recognize the signs of an avian influenza outbreak and work together to design and organize a response. This system draws from the experience of child survival programs and animal disease control efforts in organizing communities to be able to recognize a disease occurrence and conduct basic analyses that will help them control the event. The community is an extremely powerful tool in building effective surveillance capacity in resource poor environments.

Questions for the Record Submitted to
USAID Bureau for Global Health Assistant Administrator
Dr. Kent R. Hill by
Senator Daniel K. Akaka
U.S. Senate Committee on Homeland Security
and Governmental Affairs
Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia
October 4, 2007

Question # 11:

Surveillance efforts can be constrained by uncertain linkages between data collection, analysis and response. There does not seem to be a doctrine for response. What are the triggers for action by the public health community once information is gathered and a disease threat identified using surveillance systems? Follow-up: How reliable and timely is information gathered in developing countries for surveillance efforts?

Answer:

Triggers for public health action tremendously vary depending on the specific disease and the programs in place to address it. Some diseases are epidemic prone and the identification of a single case causes an immediate alert. For example, a single case of acute flaccid paralysis would trigger an urgent cascade of events that have been pre-defined and are well established by the polio eradication program. Other diseases, such as malaria, are common in some developing countries and do not elicit an emergency response.

Many developing countries do not have the laboratory capacity to rapidly confirm specific diseases. As a result, they rely on syndromic surveillance. Syndromic surveillance uses health-related data to signal a possible case or outbreak and does not rely on confirmed diagnoses. For example, a health worker reports on a set of symptoms that may correspond to a specific disease. A child with a fever accompanied by a rash would be a trigger for a case of measles. This type of surveillance allows for more timely identification of emerging problems since it does not rely on costly laboratory confirmation.

Ultimately, the timeliness of surveillance data depends on the system for communications in a given country and on the potential risk of the disease.

Question # 12: (Question # 12 is an exact duplicate of question # 2. Please see question # 2.)

Questions for the Record Submitted to
USAID Bureau for Global Health Assistant Administrator
Dr. Kent R. Hill by
Senator Daniel K. Akaka
U.S. Senate Committee on Homeland Security
and Governmental Affairs
Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia
October 4, 2007

Question # 13:

In its report, GAO notes that none of your agencies tracked obligations for infectious disease surveillance capacity-building. This concerns me. Why do you not track obligations for these surveillance activities?

Answer:

While it is true that the USAID financial management system does not code "capacity building" as a subset of infectious disease surveillance, it is not accurate to state that USAID does not track the level of funding that is devoted to capacity building or other major interventions. Capacity building, as with other specific interventions, is tracked by program managers as a routine function of contract and grant management.

What USAID's financial management system does not do is track funds at this level of detail (programmatic interventions) because it would be extremely time-consuming, complex, and expensive -- and, therefore, not practical. However, at the same time, USAID program managers who are overseeing activities that incorporate capacity building as one of their

interventions, do track this activity at the program level. This process was discussed with the Government Accountability Office (GAO) and USAID provided the levels of funding for capacity building. Indeed, the very figures that the GAO reported for capacity building were received from USAID program managers in the USAID Washington bureaus and at the country mission level. Further, the GAO was advised that adding programmatic interventions as a tracking code to USAID's financial management system would tremendously complicate the system and require expensive and complex financial reporting systems for our contractors. Greater efficiency is created when program managers make the necessary allocation of funds by intervention based on work plans and activity reports. This information can then be easily retrieved and reported as needs arise. USAID employed this very system when providing the GAO with the information requested. Further, there is no sacrifice in the accuracy or validity of the data and more of the funds can be spent on the development work.

2600 Eagan Woods Drive, Suite 50
Eagan, MN 55121-1170 USA
+1 651 209 9240 · fax: +1 651 209 9279
isis@isis.org · www.isis.org

Questions and Responses for the Record
for Nathan Flesness

November 14, 2007

VIA FACSIMILE: (202) 224-2271
The Honorable Daniel K. Akaka
Chairman
Subcommittee on Oversight of Government Management,
the Federal Workforce and the District of Columbia
Committee on Homeland Security and Government Affairs
United States Senate
Washington, DC 20510

Dear Chairman Akaka:

Thank you for the opportunity to appear before your subcommittee and to answer your additional, thoughtful questions. Following are your questions and my responses:

1. "What is the difference between ZIMS and the Wildlife Conservation Society-run GAINS?"

ZIMS and GAINS are very complementary, non-overlapping, biosurveillance systems. ISIS new ZIMS monitors in real-time some 10,000 species of mammals, birds, reptiles, amphibians, fish and invertebrates held in 700 urban centers around the world, which are very closely watched for all diseases, old, new and emerging. With ZIMS, each animal has a lifetime ID and history, including a web-based veterinary record covering vaccinations, clinical problems, treatments, outcomes, pathology/necropsy findings, and banked serum and other tissue samples (important for immunological investigations).

The surveillance power of ZIMS is for all diseases. The focus of ZIMS surveillance is in urban areas, where large numbers of people are. The timing of ZIMS surveillance is immediate. ZIMS creates a very data-rich environment, a powerful scientific and epidemiological asset when investigating any new or emerging disease issue. For example, for high-pathology strains of Avian Influenza, the various vaccines used by ISIS member institutions to vaccinate their birds can be identified and assessed for effectiveness if one of these strains of the disease is found in the area or in some birds in the zoo collection.

GAINS is focused specifically on the disease currently in the headlines, Avian Influenza (hence GAINS' name), and provides surveillance and analyses of the array of field (wild)

bird populations that the Wildlife Conservation Society (WCS) and its collaborators currently survey and sample. In addition to international surveillance, ZIMS will provide domestic surveillance monitoring at 263 institutions in 47 states in the Unites States. WCS (where GAINS is based) is located in the Bronx, New York.

ISIS and WCS have a long history of cooperation. WCS is one of the very first ISIS members in 1974, uses all ISIS legacy software systems in the zoos and aquarium they manage, and is one of the larger donors to the capital campaign to fund development of ISIS new ZIMS software. WCS also will be a major data contributor to ZIMS and has provided significant resources to prepare its data for migration to the new ZIMS system.

ISIS ZIMS and WCS GAINS provide complementary, non-overlapping surveillance. Our overall situational awareness is best-served by having both systems on watch.

2. You testified that the Defense Advanced Research Projects Agency (DARPA), recognized that zoos could be an integral part of a biosurveillance network. However, you also add that there are few systems that monitor non-agricultural animal health for new disease outbreaks. Why do you think this is the case?

DARPA's recognition of the value of a zoo information network such as ISIS ZIMS for biosurveillance was published in *Technologically-Based Biodefense*, David Siegrist's Introduction – page 6, Potomac Institute for Policy Studies, 2003.

The scarcity of systems monitoring health of non-agricultural animals seems mostly due to the lack of a business model that would generate private funds to support such information systems and the requisite veterinary professionals and lab costs. Most free-ranging wildlife, for example, have little or no veterinary monitoring because there is no general mechanism to pay the costs. An exception is the project of Ohio State University's Professor Larry Glickman of Ohio State University who has studied the Banfield company's chain of veterinary clinics and their central pet animal database as a potential biosurveillance system. However, for wildlife in general, and even most agricultural animals, there is a lack of integrated tracking of the animals over a lifetime, a lack of systematic and frequent veterinary monitoring, and a lack of systems which integrate the resulting data across a large scale. ISIS is a near-unique case, based in part on the conservation, science and animal welfare missions of the nonprofit zoos and aquariums which ISIS serves.

3. You have testified that ISIS has reached out to the World Organization for Animal Health (OIE) and a number of other organizations in the international community regarding ZIMS. However, it is my understanding that neither the OIE nor the Food and Agriculture Organization (FAO) traditionally monitor those diseases that jump from animals to humans. In fact, OIE focuses on trade while the FAO is concerned with food safety. The World Health Organization (WHO) only monitors Human Health. Given this, who should take the lead in the international community for monitoring these (animal) diseases?

This question involves vast and complex issues. I have one perspective that I would recommend as part of the answer. The WHO is part of the UN system, and OIE emerged much earlier, with the blessing of the UN's predecessor, the League of Nations. Almost the same list of governments are members of both. Both WHO and OIE have spent decades building their cooperating networks, which are their primary assets. The WHO has just this year opened up to non-governmental data sources and OIE recently began to use non-governmental sources "unofficially." It has only recently become clear scientifically how intimately human and animal health are linked, with roughly 75 percent of new and emerging human diseases coming directly from animals. It seems evident that a far closer relationship between WHO and OIE should now exist, that there should be more direct connections with CDC and emerging centers like the new EU CDC Stockholm, and that the increasing number of valuable non-governmental information sources (e.g. ISIS-ZIMS, Argus, GAINS and others) should play a more significant role. In our experience, such changes usually require funding for innovation and cooperation to trigger new relationships and alignments.

Thank you very much again for the opportunity to testify and address these questions.

Most sincerely,

Nathan R. Flesness

Nathan R. Flesness
Executive Director, ISIS

2600 Eagan Woods Drive, Suite 50
Eagan, MN 55121-1170 USA
+1 651 209 9240 · fax: +1 651 209 9279
isis@isis.org · www.isis.org

Questions and Responses for the Record
for Nathan Flesness

November 14, 2007

VIA FACSIMILE: (202) 224-2271
The Honorable Joseph I. Lieberman
Subcommittee on Oversight of Government Management,
the Federal Workforce and the District of Columbia
Committee on Homeland Security and Government Affairs
United States Senate
Washington, DC 20510

Dear Senator Lieberman:

Thank you for the opportunity to address the questions you sent regarding my testimony on October 4, 2007. Following are your questions and my responses:

1. What portion of ZIMS/ISIS data is collected from free-ranging wildlife, likely closest to emerging disease points of origin? What portion of ZIMS/ISIS data is collected from captive zoological specimens, most of which have never been in the wild? It seems important to distinguish between a true "early warning system" and an urban-focused "it's already here" alarm system. Both are of course important, but they obviously are on different points of a continuum between proactive and reactive.

ISIS ZIMS and the Wildlife Conservation Society's GAINS are highly complementary and unique surveillance systems. Both have equally different and powerful contributions to make to the Oversight Subcommittee's hearing title of "Infectious Disease Surveillance Overseas."

GAINS is an admirable and valuable initiative to assemble and provide as much wild bird Avian Influenza information as possible. With field work expanded to 23 countries as of 2007 from through USAID support to expand WCS' current field work, it offers unique integrated coverage of bird populations surveyed for Avian Influenza its countries of operation.

ISIS ZIMS is valuable for surveillance for all new and emerging diseases, not just Avian Influenza. Because ZIMS will have real-time individual animal veterinary histories for millions of closely-watched animals of 10,000 species (mammals, birds, reptiles, amphibians, fish and invertebrates), ZIMS is a powerful tool for early spotting of unusual patterns of animal illness and death across the network of 700 (and growing) cooperating

sites in 73 countries. In addition to the living zoological collections monitored, many ISIS-member zoo veterinarians work closely with local natural resource/wildlife agencies as a veterinary resource on nearby wildlife projects – and choose to enter the veterinary information on these non-zoo animals into ISIS software systems already. For example, WCS field staff have done this for years. Discussions with several other biosurveillance organizations indicate that ISIS ZIMS will be unusually valuable for early-warning of the next new or emerging disease, and the one after that.

New and emerging diseases are appearing at the rate of one-to-two each year. It is important that we increase our collective power to detect these new diseases in general, not just Avian Influenza. The ISIS ZIMS real-time network monitoring millions of healthy individually identified animals worldwide, offers early detection of patterns of animal illness and death, and mobilizes a pre-existing community of zoo veterinarians to help spot unusual disease events, whatever their cause.

For the single disease Avian Influenza and especially the dangerous strains, urban monitoring internationally is a very valuable surveillance component – adding to, not in any sense competing with, wild bird surveillance. Zoos are not isolated. They are in several kinds of contact with their surrounding animal and human populations. Zoo ponds and vegetation attract many local free-flying wild birds and small mammals. It is standard for zoo staff to monitor these animals as well, as they are potential disease threats to the valuable zoo animal collection. In addition, city open-air food markets and the pet trade bring numbers of animals from rural to urban areas, and the zoo animals are often, especially in developing regions, in close contact with human visitors – who bring diseases in with them.

The Denver zoo identifying bubonic plague as the cause of death of a capuchin monkey this year, and then finding the source of the plague in the surrounding city park rodents is one example of the surveillance power of zoos, as is the classic 1999 case of West Nile Virus identified for the first time in North America by WCS staff in the Bronx. ISIS also is in discussions with several domestic and international wildlife agencies about their interest in utilizing ZIMS in lieu of creating a real-time surveillance system of their own from scratch. When "mad cow" disease contaminated the human food supply in the UK, several species of zoo animals, whose food supplies were similarly contaminated, came down with the disease as well.

The veterinary professionals already staffed at the zoo add an invaluable additional resource to surveillance networks internationally. Furthermore, institutions in different countries use different vaccinations and other treatments in efforts to protect valuable zoological animals. For Avian Influenza of various strains, we will learn much of value by pooling this information, especially when an outbreak occurs and effectiveness of vaccination protection can be assessed.

2. Is the ISIS/ZIMS database an open access system? That is, do others besides ISIS/ZIMS members, such as any U.S. government agencies, have open access to the animal health data ISIS/ZIMS collects? Can ISIS/ZIMS member

institutions restrict access to data? And if so could the potential worry about impacting zoo visitorship affect the quality of data shared?

Because ISIS ZIMS animals are mostly under the care of veterinary professionals, there are legitimate needs to provide these veterinary practitioners and their animal care decisions with appropriate privacy. From conversations over many years and their involvement with the development of ISIS ZIMS, veterinary staff with zoo responsibilities, such as those at WCS' Bronx Zoo, definitely endorse the need for thoughtfully designed information-sharing.

Like most other disease surveillance networks, ISIS plans to provide the public with information of moderate resolution (such as summary data by country). We are currently working with many disease-monitoring/surveillance organizations (OIE, CDC, DHS and others) to develop thoughtful policies, which provide the maximum biosurveillance and public health value from ISIS ZIMS while respecting the reasonable concerns of our voluntary data sources. ISIS held a three day workshop on this topic this June at the Smithsonian Institution's National Zoological Park. It was attended by most of the relevant agencies and generated valuable recommendations for us. High resolution data from ISIS, analyzed by pattern-recognition algorithms, interpreted by professional veterinary epidemiologists, will be important in critical circumstances to help protect our members collections, wildlife in general, and people too.

Most of ISIS 700 member institutions have missions to care for and protect wildlife, and as local cultural institutions they of course want to help protect their own public communities. Their new role as part of a powerful ISIS ZIMS biosurveillance network standing watch for animals and people, is a natural fit.

Thank you very much again for the opportunity to testify and address these questions.

Most sincerely,

Nathan R. Flesness

Nathan R. Flesness
Executive Director, ISIS

Additional Questions for the Record
For Dr. James Wilson V
Submitted by Senator Daniel K. Akaka

U.S. Senate Committee on Homeland Security and Governmental Affairs
Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia

"Forestalling the Coming Pandemic: Infectious Disease Surveillance Overseas"
October 4, 2007

1. You mentioned briefly that Argus has been used to detect diseases in agricultural animals. Do you gather information about notable events impacting wild animals? Follow-up: Do you anticipate interest from the broader veterinary community in using Argus to detect and track diseases affecting non-agricultural animals?

Yes. The Argus methodology is species-agnostic, wild animal illness and die-offs are captured and reported out on a global basis by our analysts. As a simple example, we are currently tracking 44 live, individual reported events in 21 countries involving wild bird illness and death. Because of our high-volume coverage of wild animal disease and death, we now have a close relationship with the Wildlife Conservation Society Global Avian Influenza Network for Surveillance (GAINS, www.gains.org).

We do anticipate interest from the broader veterinary community for both agriculture and non-agriculture issues and have been working with institutions such as USDA, Colorado State University, University of California-Davis, Purdue University and Kansas State University. We have explored implications to our nation's livestock, poultry, and swine industries; companion animal health (e.g., dog and cat); and general veterinary infrastructure functioning.

2. Do you filter the information you gather? If so, what kinds of filters do you use to select noteworthy information?

Yes, we do filter information due to the extreme volume of data we handle. We use both computer-based algorithms such as Bayesian models and human-based processing under the philosophy that subject matter experts should be enabled by information technology, not constrained by it. We believe information is significantly diminished in values to the user community if it is not properly contextualized within the constraints of the user's interest. To that end, our entire reporting requirement process is driven heavily by frequent interaction with our sponsors and user community to constantly review and refine our standard operating procedures.

3. You mention a variety of funding sources that have helped get Argus up and running. Can you tell me what the project's costs have been to date, beginning

with project inception, and what you anticipate to be its continued operating costs over the next several years?

Total project costs to date have been approximately $33,000,000. We estimate a base maintenance of the program to cost $8,000,000 annually, with $10,000,000 enabling coverage of additional taxonomies such as crop surveillance.

4. You mentioned in your testimony that domestic data is not currently being analyzed by Argus. Why is this the case?

Argus is sponsored by the Office of the Director for National Intelligence. As such, we fall under Title 50 restrictions regarding domestic surveillance. Funding from DHS or DHHS to cover activation of a separate domestic capability is critical since "disease knows no borders". We view this as a key to fulfilling the potential of the Argus program to comprehensively meet this need of the nation.

5. What is the vision for Argus in the years ahead? How can the public health and animal health veterinary communities make maximum use of information Argus is generating? Follow-up: Do you believe this information would be of use to the state and local public health and veterinary communities?

We see tremendous broad extension of the Argus methodology and findings to the hospitals at the institutional level, veterinary care facilities, and public health and agriculture organizations at the international, national, state, and local levels. Initial test use case scenarios generated with the state of Colorado and the District of Columbia have shown enthusiastic, positive results. One point made by every state and local official we've encountered is concern regarding the need for a domestic extension of the Argus capability.

This resource can also be of considerable value to private sector entities, both non-profit and for profit; however, maximum use of the information still needs to be defined with further translational research and test use case scenarios. Furthermore, since Argus is a disruptive technology, it is important that protocols related to the sharing of Argus-generated information will need to be developed in close consultation with the Federal sponsors.

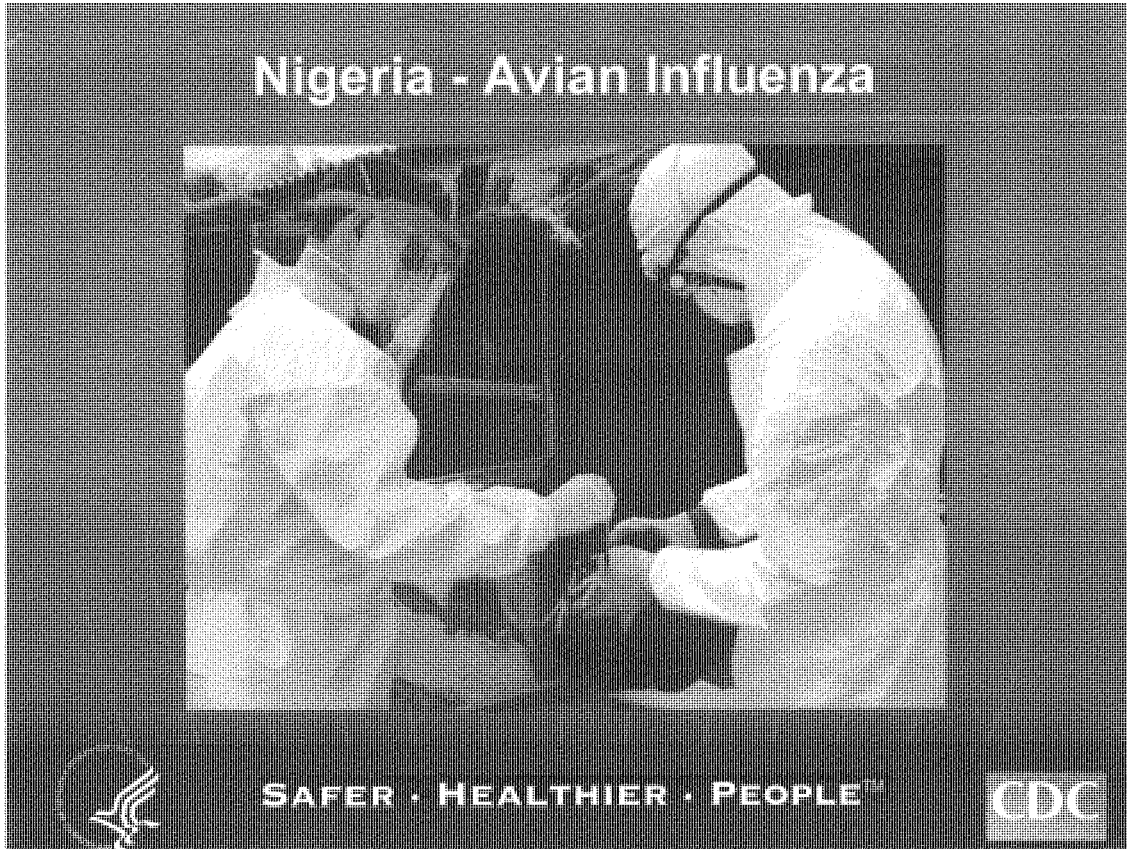
We believe Argus will influence a cultural change in a wide array of professional communities, and that should be encouraged. It is our philosophy that Argus will not have achieved its full potential until we have defined relevance for the community healthcare provider in the local communities across the nation.

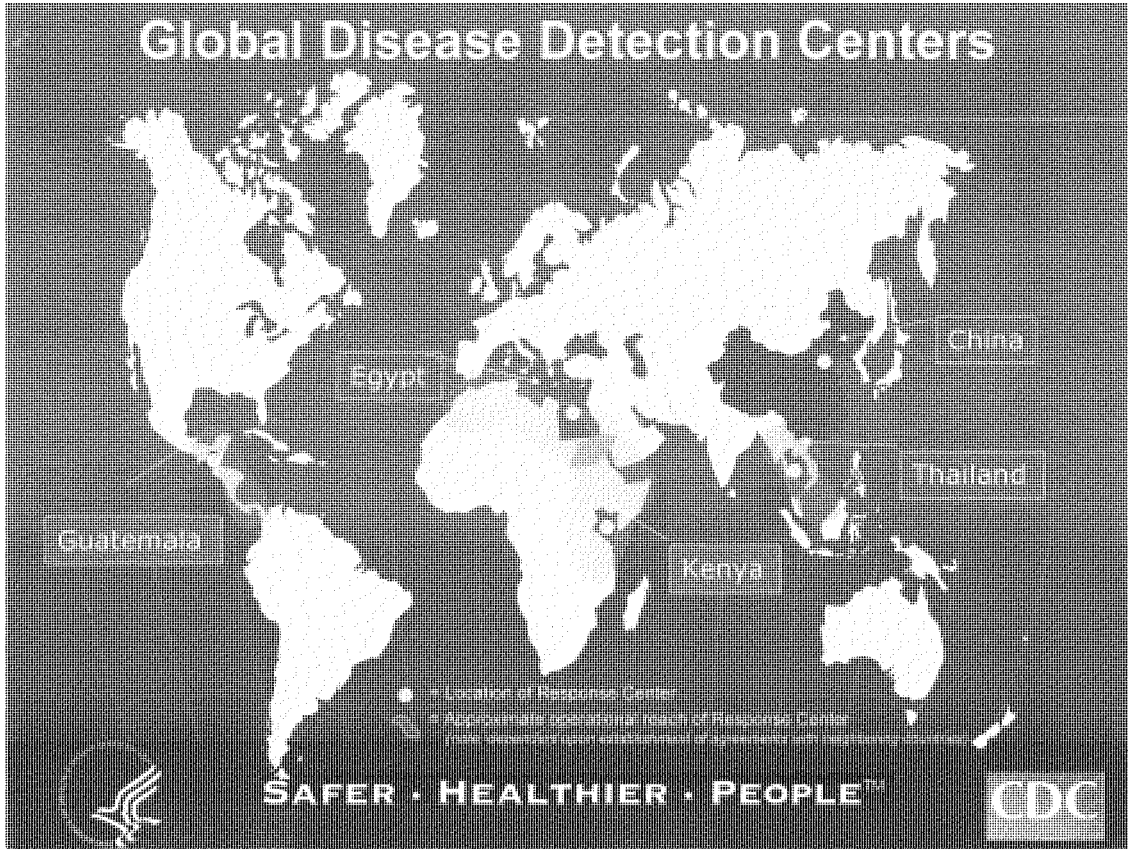
6. Representing Hawaii, I am concerned about my state's ecosystem—which has historically been sufficiently isolated from external impacts—confronting diseases impacting plants, animals, and humans that threaten aspects of our eco-system which are unique. It strikes me that there might be benefits from a system

like Argus that would be helpful in that regard. I would be interested in your thoughts on that.

According to the Department of Transportation, in 2006 over 4 million people flew in and out of Hawaii annually on non-stop air flights involving 23 countries, some of which are associated with serious infectious disease concerns. At the writing of this response, the Argus team is tracking nearly 400 biological events affecting animals and humans in these countries. Hawaii is a growing nexus of global traffic; with its unique ecosystem, this places Hawaii at risk of damage due to an imported exotic pathogen. We began operational validation of Argus in Hawaii with U.S. Pacific Command and propose further dialog with Hawaii's state and local public health and agriculture authorities to maximize its benefit to your home state. Hawaii would be an excellent future site for defining Argus interaction scenarios with state and local authorities.

Countries with
CDC Staff (2010)
Ukraine
Russia
Kazakhstan
Mongolia
Uzbekistan
Turkmenistan
Tajikistan
Kyrgyzstan
Afghanistan
Pakistan
Iran
Iraq
Syria
Turkey
Jordan
Israel
Egypt
Libya
Algeria
Tunisia
Morocco
Mauritania
Mali
Niger
Chad
Sudan
Ethiopia
Eritrea
Djibouti
Somalia
Kenya
Uganda
Tanzania
Rwanda
Burundi
Zaire
Angola
Zambia
Malawi
Mozambique
Zimbabwe
Namibia
Botswana
South Africa
Lesotho
Swaziland
Madagascar
Mauritius
Reunion
Comoros
Seychelles
Cyprus
Greece
Albania
Yugoslavia
Romania
Moldova
Bulgaria
Hungary
Slovakia
Czechoslovakia
Poland
Belarus
Lithuania
Latvia
Estonia
Finland
Sweden
Norway
Denmark
Iceland
Ireland
Great Britain
Netherlands
Belgium
Luxembourg
Germany
Austria
Switzerland
France
Spain
Portugal
Italy
Malta
Bermuda
Canada
Mexico
Guatemala
Belize
Honduras
El Salvador
Nicaragua
Costa Rica
Panama
Cuba
Haiti
Dominican Republic
Jamaica
Trinidad
Venezuela
Colombia
Ecuador
Peru
Bolivia
Paraguay
Uruguay
Argentina
Chile
Brazil
Guyana
Suriname
French Guiana
Falkland Islands
Japan
Taiwan
Korea
Vietnam
Laos
Cambodia
Thailand
Burma
Bangladesh
Nepal
Bhutan
Sri Lanka
Maldives
Malaysia
Singapore
Brunei
Indonesia
Philippines
Papua New Guinea
Australia
New Zealand
Fiji
Vanuatu
Solomon Islands
Tonga
Samoa
Kiribati
Tuvalu
Nauru
Micronesia
Marshall Islands
Palau
Guam
Saipan
Hawaii
Alaska
Puerto Rico
Virgin Islands
Cayman Islands
Turks and Caicos
Bahamas
Bermuda
Antigua
Barbados
Dominica
Grenada
St. Lucia
St. Vincent
St. Kitts
Guadeloupe
Martinique
Aruba
Netherlands Antilles
Cape Verde
Gambia
Guinea-Bissau
Guinea
Sierra Leone
Liberia
Ivory Coast
Burkina Faso
Ghana
Togo
Benin
Nigeria
Cameroon
Equatorial Guinea
Gabon
Congo
Central Africa
Sao Tome
Mozambique
Zimbabwe
Namibia
Botswana
Lesotho
Swaziland
Madagascar
Mauritius
Reunion
Comoros
Seychelles
Cyprus
Greece
Albania
Yugoslavia
Romania
Moldova
Bulgaria
Hungary
Slovakia
Czechoslovakia
Poland
Belarus
Lithuania
Latvia
Estonia
Finland
Sweden
Norway
Denmark
Iceland
Ireland
Great Britain
Netherlands
Belgium
Luxembourg
Germany
Austria
Switzerland
France
Spain
Portugal
Italy
Malta
Bermuda
Canada
Mexico
Guatemala
Belize
Honduras
El Salvador
Nicaragua
Costa Rica
Panama
Cuba
Haiti
Dominican Republic
Jamaica
Trinidad
Venezuela
Colombia
Ecuador
Peru
Bolivia
Paraguay
Uruguay
Argentina
Chile
Brazil
Guyana
Suriname
French Guiana
Falkland Islands
Japan
Taiwan
Korea
Vietnam
Laos
Cambodia
Thailand
Burma
Bangladesh
Nepal
Bhutan
Sri Lanka
Maldives
Malaysia
Singapore
Brunei
Indonesia
Philippines
Papua New Guinea
Australia
New Zealand
Fiji
Vanuatu
Solomon Islands
Tonga
Samoa
Kiribati
Tuvalu
Nauru
Micronesia
Marshall Islands
Palau
Guam
Saipan
Hawaii
Alaska
Puerto Rico
Virgin Islands
Cayman Islands
Turks and Caicos
Bahamas
Bermuda
Antigua
Barbados
Dominica
Grenada
St. Lucia
St. Vincent
St. Kitts
Guadeloupe
Martinique
Aruba
Netherlands Antilles
Cape Verde
Gambia
Guinea-Bissau
Guinea
Sierra Leone
Liberia
Ivory Coast
Burkina Faso
Ghana
Togo
Benin
Nigeria
Cameroon
Equatorial Guinea
Gabon
Congo
Central Africa
Sao Tome
SAFER · HEALTHIER · PEOPLE™
CDC


Nigeria - Avian Influenza
SAFER · HEALTHIER · PEOPLE™
CDC


Global Disease Detection Centers
Guatemala
Egypt
Kenya
China
Thailand
Location of Regional Center
Regional Laboratory Network or Regional Center
Field Epidemiology Training Program or Regional Center
SAFER · HEALTHIER · PEOPLE™
CDC

DRC Ebola Outbreak
Isolation Ward
SAFER · HEALTHIER · PEOPLE™
CDC

Additional Post-Hearing Questions for the Record
Submitted to Dr. Kevin Yeskey, Director, Office of Preparedness and Emergency Operations, Department of Health and Human Services
From Senator Daniel K. Akaka

October 2, 2007

1. ***As a follow up to a question asked at the hearing, the Centers for Disease Control and Prevention has prepared both the TIV and LAIV vaccines to combat the 2007-2008 influenza season viruses. One of the viruses circulating is related to the 1968 Hong Kong pandemic flu or H3N2 virus. Please provide a status update of the outlook for this season's influenza and how we have prepared for this type of influenza.***

From September 30 through December 8, 2007, U.S. laboratories that participate in CDC national influenza surveillance reported that they have tested a total of 29,488 specimens for influenza viruses, 708 (2.4%) of which were positive. This level of influenza is low and is typical for this time of year in the U.S. Among the 708 influenza viruses detected, 650 (92%) were influenza A viruses and 58 (8%) were influenza B viruses. Of the 153 influenza A viruses that have been tested further, 125 (82%) were influenza A (H1N1) viruses and 28 (18%) were influenza A (H3N2) viruses.

Influenza A (H3N2) viruses have caused disease in humans since the 1968 "Hong Kong Flu" pandemic, but, like all influenza viruses, H3N2 viruses have undergone continual change and new H3N2 strains have evolved from the original Hong Kong Flu H3N2 virus. The 2007-08 influenza vaccines contain A/Wisconsin/67/2005 (H3N2) virus. At this point in the 2007–08 influenza season, CDC has identified strains of influenza A(H3N2) that may not be optimally matched to the H3N2 vaccine strain; however, H1N1 viruses seem to be predominating as of December 14, 2007, and these viruses are well matched to the H1N1 vaccine strain. It is too early in the influenza season to determine which influenza viruses will predominate or how well the vaccine and circulating strains will match overall.

Annual vaccination is the most effective control measure against influenza even when the match between the viruses included in the vaccine and those circulating in the community are not optimally matched. Studies done in years without an optimal match have shown that the vaccine continues to provide cross-protection against related viruses and can reduce influenza-related illnesses and influenza complications, although overall effectiveness may be reduced. CDC will continue to monitor for changes in influenza viruses throughout the influenza season and provide weekly updates which are posted in the CDC website. http://www.cdc.gov/flu/. CDC will also monitor and report on influenza vaccine effectiveness during the season.

For the 2007-08 season, six licensed manufacturers produced influenza vaccines for the US market. Overall projection for production at the beginning of the season indicated that as many as 132 million doses might be produced, depending on production yields, FDA release of vaccine, and sufficient demand for product. As of December 20, 2007, over 121 million doses of

influenza vaccine had been distributed in the US, which is about 18 million more doses than were distributed last year by the end of the season.

Because of the potential sub-optimal match between the vaccine and circulating strains of H3N2, CDC has approached the current season with a multi-faceted strategy. Surveillance systems are being optimized with active dialogue with state and local public health officials to provide early reporting and specimen submission. CDC Subject matter experts participated extensively in the National Influenza Vaccination Week activities. CDC's seasonal influenza campaign message, "Take 3", encourages Americans to 1) **Take** time to get a vaccine, 2) **Take** everyday preventive actions and 3) **Take** antiviral drugs if your doctor says to. If surveillance information indicates a severe influenza season and a sub-optimal match, a staged communication plan for local public health and healthcare system partners recommending more aggressive testing and antiviral medication use has been developed.

2. ***Hospital care and allocation of scarce hospital resources is going to be a difficult issue to confront when a pandemic outbreak occurs. You mentioned that part of your plan is to keep people out of the hospitals as much as possible in the event of an outbreak, and that you have developed a document and strategies to address these two issues. Can you please provide the Subcommittee with greater detail on your plans to a) keep people out of the hospitals and b) allocate scarce medical resources in the event of a pandemic influenza outbreak?***

HHS led the development of two documents that support State and local planning for mitigating the effects of the pandemic and allocating scarce resources. They are: *Mass Medical Care with Scarce Resources: A Community Planning Guide* and *Interim Pre-Pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States.*

In the event of a catastrophic public health or terrorism-related event, such as an influenza pandemic or the detonation of improvised nuclear devices, the resulting tens of thousands of victims will be likely to overwhelm the resources of a community's health care system. In this dire scenario, which we refer to as a mass casualty event or MCE, it will be necessary to *allocate scarce resources in a manner that differs from usual circumstances but is appropriate to the situation.* Making optimal decisions concerning the allocation of scarce resources could make a big difference in the degree to which health care systems continue to function; ultimately it could mean saving many thousands of lives.

Mass Medical Care with Scarce Resources: A Community Planning Guide provides community planners—as well as planners at the institutional, State, and Federal levels—with information on planning for and responding to an MCE. The *Community Planning Guide* is the result of collaboration between the Department of Health and Human Services' Office of the Assistant Secretary for Preparedness and Response and the Agency for Healthcare Research and Quality (AHRQ). It was written by leading experts in six areas related to mass casualty care: prehospital care, hospital and acute care, alternative care sites, palliative care, ethical issues, and legal considerations.

The report provides information on:

- The circumstances that communities are likely to face in an MCE.
- Key constructs, principles, and structures to be incorporated into the planning for an MCE.
- Approaches and strategies that could be used to provide the most appropriate standards of care possible under the circumstances.
- Examples of tools and resources to help States and communities in their planning process.
- Illustrative examples of how specific health systems, communities, or States have approached various issues in their MCE-related planning efforts.

The second document referenced by Dr. Yeskey, *Interim Pre-Pandemic Planning Guidance: Community Strategy for Pandemic Influenza Mitigation in the United States,* provides interim planning guidance for State, territorial, tribal and local communities; guidance that focuses on several measures other than vaccination and drug treatment that might be useful during an influenza pandemic to reduce its harm. We call these nonpharmaceutical interventions, or NPIs.

The use of nonpharmaceutical interventions (NPIs) for mitigating a community-wide epidemic has three major goals: 1) delay the exponential growth in incident cases and shift the epidemic curve to the right in order to "buy time" for production and distribution of a well-matched pandemic strain vaccine; 2) decrease the epidemic peak; and 3) reduce the total number of incident cases, thus reducing community morbidity and mortality. Ultimately, reducing the number of persons infected is a primary goal of pandemic planning. NPIs may help reduce influenza transmission by reducing contact between sick and uninfected persons, thereby reducing the number of infected persons. Reducing the number of persons infected will, in turn, lessen the need for healthcare services and minimize the impact of a pandemic on the economy and society. The surge of need for medical care that would occur following a poorly mitigated severe pandemic can be addressed only partially by increasing capacity within hospitals and other care settings. Reshaping the demand for healthcare services by using NPIs is an important component of the overall mitigation strategy. In practice, this means reducing the burdens on the medical and public health infrastructure by decreasing demand for medical services at the peak of the epidemic and throughout the epidemic wave; by spreading the aggregate demand over a longer time; and, to the extent possible, by reducing net demand through reduction in patient numbers and case severity.

Communities, individuals and families, employers, schools, and other organizations will be asked to plan for the use of these interventions to help limit the spread of a pandemic, prevent disease and death, lessen the impact on the economy, and keep society functioning. This interim guidance introduces a Pandemic Severity Index to characterize the severity of a pandemic, provides planning recommendations for specific interventions that communities may use for a given level of pandemic severity, and suggests when these measures should be started and how long they should be used. The interim guidance will be updated when significant new information about the usefulness and feasibility of these approaches emerges.

3. ***As another follow up to the last question asked at the hearing, the cost of treating patients infected with pandemic influenza is going to be considerable, especially given that nearly 47 million Americans are without health insurance. Please provide information from the Centers for Medicare and Medicaid Services on how the Department of Health and Human Services plans to work with public and private sector partners to address the cost of health care finance in the event of such a public health emergency.***

CMS works in coordination with the Department of Health and Human Services in overall preparedness in the event of an emergency. There are a number of ways the Centers for Medicare & Medicaid Services (CMS) covers influenza treatment. For beneficiaries who are enrolled in Medicare Part B, CMS pays for influenza vaccinations through Medicare with no deductible or copayments. For beneficiaries who are enrolled in Medicare Part D, the plans cover antiviral medications for enrollees who are infected with influenza or for those with post-exposure risk. As always, CMS through Medicare covers the cost of treatment for those infected with influenza who require inpatient or outpatient services.

Medicaid, through the States, covers the cost of influenza medications and vaccinations for beneficiaries and necessary treatment on an impatient and outpatient basis. For the uninsured population, the Medicare and Medicaid Disproportionate Share Hospital Programs will cover some of the cost of treatment for the influenza.

United States Government Accountability Office

GAO

Report to the Subcommittee on Oversight of Government Management, the Federal Workforce, and the District of Columbia, Committee on Homeland Security and Governmental Affairs, U.S. Senate

May 2007

THE FEDERAL WORKFORCE

Additional Steps Needed to Take Advantage of Federal Executive Boards' Ability to Contribute to Emergency Operations

GAO-07-515

GAO

Highlights

[illegible]

Why GAO Did This Study

[illegible]

What GAO Recommends

[illegible]

May 2007

THE FEDERAL WORKFORCE

Additional Steps Needed to Take Advantage of Federal Executive Boards' Ability to Contribute to Emergency Operations

What GAO Found

Located outside Washington, D.C., in 28 cities with a large federal presence, the federal executive boards (FEB) are interagency coordinating groups designed to strengthen federal management practices, improve intergovernmental relations, and participate as a unified federal force in local civic affairs. Created by a Presidential Directive in 1961, the boards are composed of the federal field office agency heads and military commanders in their cities. Although membership by agency heads on the boards is required, active participation is voluntary in practice. The boards generally have staff of one or two full-time personnel, including an executive director. The FEBs have no congressional charter and receive no congressional appropriation but rather rely on voluntary contributions from their member agencies. Although the boards are not intended to be first responders, the regulations that guide the FEBs state that emergency operations is one of their functions.

The Office of Personnel Management (OPM) and the FEBs have designated emergency preparedness, security, and employee safety as a core function of the boards and are continuing to work on a strategic plan that will include a common set of performance standards for their emergency support activities. All of the selected FEBs were performing emergency activities, such as organizing preparedness training, and FEB representatives and Federal Emergency Management Agency (FEMA) officials reported that these activities mutually advanced their missions.

The FEBs, however, face key challenges in carrying out their emergency support role. First, their role is not defined in national emergency plans. According to several FEMA officials, FEBs could carry out their emergency support role more effectively if it was included in national emergency management plans. The framework within which the FEBs operate with member agencies and OPM also poses challenges in holding the boards accountable for their emergency support function. In addition, the funding sources for the boards are uncertain, affecting their ability to plan for and commit to providing emergency support services.

Despite these challenges, the nature of pandemic influenza, which presents different concerns than localized natural disasters, makes the FEBs a particularly valuable asset in pandemic preparedness and response. Many of the selected boards had already hosted pandemic preparedness events, which included their member agencies and local community organizations. With the greatest burden of pandemic response resting on the local communities, the FEBs' outreach and their ability to coordinate across organizations suggest that they may be an important resource in preparing for and responding to a pandemic.

Contents

Letter		1
	Results in Brief	3
	Background	6
	FEB Emergency Preparedness and Response Roles and Responsibilities Are Being Developed as a Core Function of the Boards	8
	The FEBs Face Key Challenges in Providing Emergency Support Services	17
	The Nature of Pandemic Influenza May Make the FEBs a Particularly Valuable Asset in Pandemic Preparedness and Response	27
	Conclusions	35
	Recommendations for Executive Action	36
	Agency Comments	37
Appendix I	**Objectives, Scope, and Methodology**	39
Appendix II	**Office of Personnel Management Document Describing the FEB Role and Responsibilities in Emergency Situations**	41
Appendix III	**FEBs' Host Agencies**	42
Appendix IV	**Comments from the Office of Personnel Management**	43
Appendix V	**GAO Contact and Staff Acknowledgments**	45
Table		
	Table 1: Number of Federal Employees and Agencies Served by Each FEB in Descending Order of Employees Served	23

Figures

Figure 1: Location of the 28 FEBs 7
Figure 2: Jurisdictional Boundaries of the 28 FEBs 22
Figure 3: Participants in Two Minnesota FEB Pandemic Tabletop Exercises 32

Abbreviations

AMEM	Association of Minnesota Emergency Managers
APC	Advanced Pharmaceutical Cache
COOP	continuity of operations
DHS	Department of Homeland Security
FEB	federal executive board
FEMA	Federal Emergency Management Agency
GETS	Government Emergency Telecommunications Service
GSA	General Services Administration
HCLMSA	Human Capital Leadership and Merit System Accountability
JFO	joint field office
JPDO	Joint Planning and Development Office
NARA	National Archives and Records Administration
ONSC	Office of National Security Coordination
OPM	Office of Personnel Management

This is a work of the U.S. government and is not subject to copyright protection in the United States. It may be reproduced and distributed in its entirety without further permission from GAO. However, because this work may contain copyrighted images or other material, permission from the copyright holder may be necessary if you wish to reproduce this material separately.

United States Government Accountability Office
Washington, DC 20548

May 4, 2007

The Honorable Daniel K. Akaka
Chairman
The Honorable George V. Voinovich
Ranking Member
Subcommittee on Oversight of Government Management,
the Federal Workforce, and the District of Columbia
Committee on Homeland Security and Governmental Affairs
United States Senate

In an April 2004 report on opportunities to improve federal continuity planning, we concluded that federal executive boards (FEB) are uniquely positioned to improve coordination of emergency preparedness efforts in areas outside of Washington, D.C.[1] Located in 28 cities with a large federal presence, the FEBs are interagency coordinating groups designed to strengthen federal management practices, improve intergovernmental relations, and participate as a unified federal force in local civic affairs. The membership of each board is made up of the highest ranking federal agency officials in the FEB service area. The regulations that guide FEB operations state that the boards shall be responsible for emergency operations, such as those under hazardous weather conditions; responding to blood donation needs; and communicating related leave policies.[2] Much of the FEB emergency operations responsibility in the past has been providing advisories regarding hazardous weather conditions to member agency leaders and providing a forum in which agency leaders could make informed decisions about office closings affecting their employees. The Office of Personnel Management (OPM), which provides direction to the boards, is now emphasizing that in the post-9/11 environment the FEBs have a transformed role that encompasses elements of emergency preparedness, employee security, and continuity of operations. Although the boards are not intended to be first responders, we recommended in the 2004 report that OPM should determine the desired role for the FEBs in improving coordination of emergency preparedness efforts and identify and address FEB capacity issues to meet that role.

[1]GAO, *Human Capital: Opportunities to Improve Federal Continuity Planning Guidance*, GAO-04-384 (Washington, D.C.: Apr. 20, 2004).

[2]5 C.F.R. § 960.107 (c) (6).

Determining the FEB role in emergency operations is particularly challenging given that the boards operate with no independent authority and with resources voluntarily provided by member agencies. The boards depend on a host agency, generally the agency with the greatest number of employees in the area, to provide staff of usually one or two full-time personnel, including an executive director. The FEBs also rely on their hosts and other member agencies for operating expenses. Important to emergency preparedness, one of the FEB functions includes building relationships with state and local organizations to promote federal involvement within their communities.

Emergency preparedness efforts involve dealing with the full range of emergencies, including natural and man-made disasters. Attention has focused on pandemic influenza, a real and significant threat facing the United States and the rest of the world. Influenza pandemics occur when a novel influenza virus emerges that can be effectively transmitted between humans who have little immunity to it. The last three pandemics in the 20th century occurred in 1918, 1957, and 1968, and killed approximately 40 million, 2 million, and 1 million people worldwide, respectively. Although the timing of the next pandemic is unpredictable, there is widespread agreement that an influenza pandemic will occur at some point. A pandemic is not a singular event, but is likely to come in waves, each lasting months, and pass through communities of all sizes across the nation and the world simultaneously. A pandemic could threaten society and the economy by removing essential personnel, including federal government employees, from the workplace for weeks or months.

To obtain a better understanding of the roles, responsibilities, and capacities of selected FEBs for emergency operations, particularly in the event of pandemic influenza, you asked us to (1) identify the actions FEBs have taken to fulfill their emergency preparedness and response roles and responsibilities, (2) describe the key challenges facing the FEBs in fulfilling these roles and responsibilities, and (3) evaluate the extent to which the FEBs can contribute to emergency preparedness and response to pandemic influenza.

To address our objectives, we selected 14 FEBs for our study. The selected FEBs are Atlanta, Baltimore, Boston, Chicago, Dallas-Fort Worth, Denver, Los Angeles, Minnesota, New Orleans, New York City, Oklahoma, Philadelphia, San Francisco, and Seattle. These FEBs were selected because they coordinate the greatest number of federal employees or have recent experience with specific emergency management events. We obtained and reviewed FEB documents, such as annual reports, monthly

activity reports, minutes, and correspondence, and interviewed at least two key FEB representatives from each selected board, including the chair or vice chair and executive director. We also had discussions with and obtained pertinent documentation from officials at OPM and the Federal Emergency Management Agency (FEMA) at their headquarters in Washington, D.C. Because the FEBs and FEMA collaborate closely on continuity of operations (COOP) activities in the field, we also interviewed the FEMA regional directors in regions V and VI based in Chicago, Illinois, and Denton, Texas, respectively.[3] In addition, we reviewed academic literature and prior GAO reports about leveraging collaborative networks.

We conducted our review in the 14 case study FEB cities and Washington, D.C., from March 2006 through February 2007 in accordance with generally accepted government auditing standards. Detailed information on our scope and methodology appears in appendix I.

Results in Brief

OPM and the FEBs are developing a strategic plan for the boards that will establish emergency preparedness, security, and employee safety as a core FEB function with a common set of expectations for the boards' emergency activities. This strategic plan should more fully ensure that the federal employees located in the FEB service areas receive the needed level of emergency support. OPM officials recognize that the FEBs can add value to regional preparedness efforts as vehicles for communication, coordination, and capacity building but acknowledge that the emergency support activities provided by the FEBs vary. However, all of the selected boards were involved in emergency activities such as disseminating emergency preparedness information, serving as federal liaisons for state and local emergency management officials, and organizing preparedness training. Officials from FEMA, which provides guidance and assistance for COOP planning across the executive branch, and almost all of the executive directors or chairs from the selected boards cited a positive and beneficial working relationship. In addition, although not all of the FEB representatives felt this was a responsibility the boards should assume, some of the selected boards have played a role in responding to emergencies in the past. For example, the Oklahoma FEB staff played a role in helping first responders locate building occupants after the April 19, 1995, bombing of the federal building in Oklahoma City.

[3]COOP planning is an effort conducted by agencies to ensure that the capability exists to continue essential agency functions across a wide range of potential emergencies.

The FEBs face several key challenges in providing support for the nation's emergency preparedness and response efforts. First, the FEB role in supporting the nation's emergency response structure is not developed or identified in federal emergency guidance and plans. According to several FEMA officials, including the FEBs in a formal role within federal emergency structures would help the boards carry out their emergency support role more effectively by identifying and communicating the value the boards can add to emergency support. In addition, the framework under which the boards operate poses accountability challenges. Although OPM is responsible for providing program direction and oversight to the boards, many of the FEB representatives said OPM cannot provide sufficient leadership and feedback to 28 boards with its one-person FEB program office. Also, aligning performance expectations for the FEB executive directors consistent with OPM direction was hampered by the fact that the executive directors report to a host agency and are usually subject to that agency's rating and performance management system. Finally, the differing sizes of the FEB service areas and their funding and resource levels, coupled with the voluntary nature of their funding structure, affect the capacities of the boards to support emergency preparedness. The Los Angeles FEB, for example, primarily serves a six-county area in the immediate vicinity of Los Angeles with approximately 120,000 federal employees, yet the executive director noted that its staffing is similar to FEBs covering much smaller areas and numbers of employees and agencies. With FEB resources dependent on the continued willingness of the host agency and other member agencies to contribute, several of the executive directors from the selected boards said it was difficult to plan and commit to providing emergency support services. Many of the FEB representatives from the selected boards expressed concern that their activities will be further affected by reduced agency funding and resource support as agency budgets grow more constrained.

Despite these FEB challenges, the nature of an influenza pandemic makes the boards a particularly valuable asset in planning for and responding to a national disaster of this nature. Unlike a localized disaster, such as a hurricane or earthquake, for which national resources can be mobilized and deployed to assist in the disaster response, pandemic influenza will be largely addressed by the resources available to each community it affects. In the current pandemic planning stages, many of the selected FEBs were already using their community relationships to facilitate communication and coordination with local federal agency leaders and state and local governments. These FEBs were also building capacity for pandemic influenza response within their member agencies and community organizations through hosting pandemic influenza training and exercises.

For example, 13 of the 14 selected FEBs were involved in pandemic-related activities that ranged from sponsoring informational briefings to coordinating pandemic exercises. The Minnesota FEB hosted a pandemic influenza exercise in October 2006 that included approximately 180 participants from 100 organizations within federal agencies, state and local government, and the private sector. Given their knowledge of the federal agencies within their jurisdictions, during pandemic influenza FEBs have the potential to provide a forum to inform the decisions of member agency leaders and emergency coordinators, similar to what the boards provide for other hazards. Additionally, several of the selected FEBs were considering how they could support the federal workforce during pandemic influenza and provide assistance in coordinating resources to federal agencies responding to the pandemic.

This report contains four recommendations to the Director of OPM to work with the FEBs and FEMA to improve the capacity of the boards to enhance their emergency support services. OPM and FEMA should formalize the FEBs' contribution to FEMA's emergency preparedness efforts, and OPM should initiate discussion with the Department of Homeland Security (DHS) and other responsible stakeholders to determine the feasibility of integrating the FEB emergency support responsibilities into the established emergency response framework. In addition, OPM should also continue to work on a common set of performance standards for emergency support responsibilities across the FEB system, for which the boards will be held accountable. As part of the FEB strategic planning process, OPM should also develop a proposal for alternative funding mechanisms to help ensure that the FEBs can provide the appropriate level of emergency support for the federal workforce.

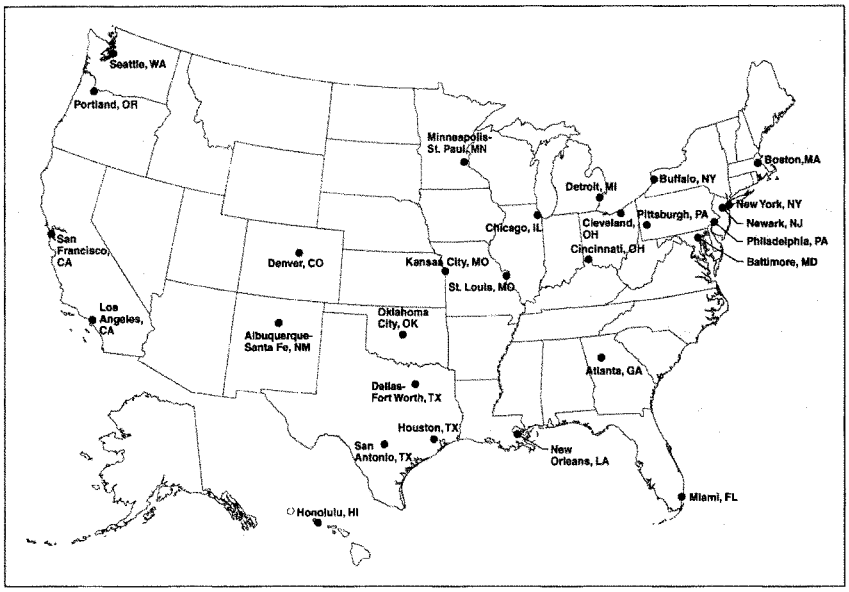
We provided a draft of the report to the Director of OPM and to the Secretary of Homeland Security. We received written comments from OPM, which are included in appendix IV. While not commenting specifically on the recommendations, OPM stated that it understands the importance of the issues raised in the report. By documenting results and creating a consistent accountability mechanism, and through institutionalized relationships with strategic partners like FEMA, OPM believes that it is building a strong business case through which it can address the resources FEBs need to continue operations. In comments received from FEMA by e-mail, FEMA concurred with the findings of the report and welcomed the opportunity to work with OPM to develop a memorandum of understanding that more formally defines the FEB role in emergency planning and response.

Background

FEBs were established by a Presidential Directive in 1961 to improve coordination among federal activities and programs outside Washington, D.C. The boards' overall mission includes supporting and promoting national initiatives and responding to the local needs of federal agencies and their communities. They provide a point of coordination for the development and operation of federal programs having common characteristics. Approximately 85 percent of all federal employees work outside the greater Washington, D.C., area, and the number of FEBs has grown from 10 to 28 over the past 46 years. When President Kennedy established the FEBs, they were located in the major cities in each of the 10 Civil Service Commission administrative regions. He later added 2 more boards, while President Johnson authorized 3 more, President Nixon added 10, and President Ford added 1. Two more boards were added by OPM in the 1990s bringing the total number of boards to 28. Figure 1 shows the metropolitan areas where the 28 boards are located.[4]

[4]Federal executive associations or federal executive councils may be located in places where FEBs do not exist. They have purposes and objectives similar to those of the FEBs, although they do not function within the same formal set of parameters as FEBs (e.g., they are not officially established by Presidential Memorandum nor do they receive policy direction and guidance from OPM).

Figure 1: Location of the 28 FEBs



Sources: GAO analysis based on OPM data and Map Resources (map).

According to the regulations that guide the FEBs, the Director of OPM is responsible for overseeing and directing the operations of all of the FEBs consistent with the law and with the directives of the President. The boards are composed of the federal field office agency heads and military commanders in their cities, and the regulations state that each FEB should have a chair elected by the FEB members to serve a term not to exceed a year. The regulations also state that the boards should be governed by bylaws or other rules for their internal governance that are developed for each board. Although through Presidential Directive FEB membership is mandatory for the senior agency officials within the FEB's geographic

boundaries, the boards have no independent authority and they rely on the voluntary cooperation of their members to accomplish their goals.

The FEB funding structure is unusual within the federal government. The boards have no legislative charter and receive no congressional appropriation. Rather, each FEB is supported by a host agency, usually the agency with the greatest number of employees in the region. These host agencies provide varying levels of staffing, usually one or two full-time positions—an executive director and an executive assistant. Some agencies also temporarily detail employees to the FEB staff to assist their local boards and to provide developmental opportunities for their employees. Additionally, the FEBs are supported by member agencies through contribution of funds as well as in-kind support, such as office space, personal computers, telephone lines, and Internet access.[5] In 2006, OPM estimated the cost of FEB operations at approximately $6 million.

FEB Emergency Preparedness and Response Roles and Responsibilities Are Being Developed as a Core Function of the Boards

To assist in standardizing emergency activities across the FEB system, OPM and the FEBs are establishing an emergency preparedness, security, and employee safety set of activities with performance measures that will be common to all of the boards. Although this effort is not completed, all of the selected FEBs were doing some emergency activities, such as hosting emergency preparedness training and exercises. For example, FEMA officials and the FEB representatives reported working together, often with the General Services Administration (GSA), on COOP training and exercises. In the past, some of the selected FEBs also played a role in responding to emergencies, although not all of the FEB representatives felt this was an appropriate activity for the boards.

[5]For a time, under a governmentwide restriction against interagency financing of boards, commissions, or other groups, interagency financing of FEBs was prohibited, including both cash and in-kind financial support. See, 67 Comp. Gen. 27 (1987). However, beginning in 1996, Congress exempted FEBs from this restriction. Omnibus Consolidated Appropriations Act, Pub. L. No. 104-208, § 613, 110 Stat. 3009, 3009-356 (1996).

OPM and the FEBs Continue to Work on a Common Set of Performance Standards for FEB Emergency Support Activities

OPM and the FEBs are developing a multiyear strategic plan that will include a core function for the FEBs called emergency preparedness, security, and employee safety. The plan will include expectations and measures to assess how well each FEB is performing the activities. OPM has reported working with the boards on emergency planning issues since 2001, and in March 2004, a document summarizing the FEB role in emergency situations was finalized. The boards' emergency support responsibilities include elements such as serving as a federal liaison between state and local emergency officials, establishing notification networks and interagency emergency preparedness councils, and hosting emergency preparedness exercises for agencies. A complete list of the FEB emergency support responsibilities detailed in the 2004 document can be found in appendix II. According to an OPM official, designating emergency support as a core function of the FEBs will further enhance the FEB role in emergency situations. OPM officials recognize that the FEBs can add value to regional preparedness efforts as vehicles for communication, coordination, and capacity building but acknowledge that the emergency activities of the FEBs have varied from board to board. The emergency support function is intended to provide consistent delivery of FEB emergency preparedness and response programs and activities for the federal workforce across the system of 28 boards.

Not all of the representatives from the selected FEBs were convinced that the boards should have an expanded emergency service support role. Although all of the selected boards had some type of emergency communication network and emergency preparedness council in place, there was disagreement among the FEB representatives on the role the FEBs should play in emergency service support, particularly during an emergency. Without adequate staff and resources, some of the executive directors expressed concern that they will not be able to meet expectations. One executive director, for example, noted that because her local board lacked 24/7 communication and coordination abilities, it could not be held accountable for emergency service roles and responsibilities. Another executive director commented that there was a general expectation within the board's metropolitan federal community that the FEB will assume a significant leadership role during a possible future emergency. However, he observed that limited and declining funding does not provide for an effective communication system. As a consequence, he felt this expectation was unrealistic and may contribute to major misunderstandings in the event of a significant emergency.

On the other hand, several of the executive directors felt that the FEBs would be able to accomplish much more in this area with additional

resources. For example, one executive director, with an emergency operations background, emphasized that if the boards were given dependable funding and increased stature within the federal government by formal recognition of their emergency support role, their return on investment in terms of emergency support functions would be substantial. In general, the consensus among those who viewed the FEBs as having an increased role in emergency operations was that with dependable funding and resources, all the boards in the FEB system could and should provide a similar level of emergency operations support. Several FEB representatives also stated that OPM leadership and direction in clearly outlining emergency operations expectations and OPM's oversight of these activities would diminish uncertainty about the boards' role in emergency support, both among the boards and federal agencies in general. They were encouraged by the designation of emergency services as a core FEB function.

All of the Selected FEBs Were Performing Some Emergency Activities

The FEBs are charged with providing timely and relevant information to support emergency preparedness and response coordination, and OPM expects the boards to establish notification networks and communications plans to be used in emergency and nonemergency situations. The boards are also expected to disseminate relevant information received from OPM and other agencies regarding emergency preparedness information and to relay local emergency situation information to parties such as OPM, FEB members, media, and state and local government authorities. FEB representatives generally viewed the boards as an important communications link between Washington and the field and among field agencies. For example, the Atlanta FEB's executive director described the boards as a conduit for both emergency and nonemergency information to member agencies through e-mail, telephone, and Web sites. While many of the items needing dissemination are also passed through normal agency channels, several FEB representatives noted that it usually takes longer for communication to be received through their agency headquarters than through the FEB channel. The Oklahoma FEB chair described the FEBs as central depositories that receive information from headquarters and quickly disseminate that information to the field, reducing the information gap between Washington, D.C., and the rest of the country.

Previously, much of the emergency support responsibility of FEBs was in providing communication regarding hazardous and inclement weather conditions. Almost all of the selected FEBs reported this as an emergency activity for which they continue to have responsibility. For example, the Atlanta FEB executive director said that during potential weather

emergencies, she and members of the Policy and Steering Committee from GSA and the National Weather Service gather information about the forecast and road conditions. The executive director, FEB chair, and members of the Policy and Steering Committee then conduct a 4:00 a.m. conference call to make a decision about suggested agency closings or delayed reporting. Following the conference call, the FEB executive director posts a message on the board's emergency hazard line that designated agency employees can check. This message is also posted to the FEB general telephone line and the FEB Web site. Several of the executive directors emphasized that they can only make recommendations to the federal agencies in their areas of service, but they cannot mandate that federal agencies close for weather or other emergencies.

Although each of the selected boards we reviewed reported conducting communications activities as a key part of its emergency support service, they used a number of different types of communication systems. The Boston FEB, for example, operates two electronic communications mechanisms to be in contact with senior federal agency officials during local and national emergencies, both during and after hours. The first is an Internet portal, developed and maintained by the DHS Federal Protective Service, which is designed to provide senior agency officials access to up-to-date information, such as threat assessments and emergency weather. The second communications system is called EDIAL, housed and maintained by the First U.S. Coast Guard District's 24-hour command system. EDIAL, funded for the FEB by GSA New England, enables the board to communicate with agency officials simultaneously via an electronic telephone message in times of emergency. Several of the executive directors mentioned the importance of having access to the Government Emergency Telecommunications Service (GETS) cards, a White House-directed emergency phone service. GETS provides emergency preparedness personnel a high probability of completion for their phone calls when the probability of completing a call through normal channels is significantly decreased. The majority of the selected boards reported keeping an emergency contact list for officials in their member agencies.

Several of the executive directors emphasized the importance of standardizing the communications systems of the boards so that every FEB is communicating in the same way. The communication abilities among the selected FEBs did vary, often dependent on the communication system provided by a supporting agency. For example, the Atlanta FEB reported previously using an emergency call-down system supplied by the Atlanta U.S. District Court, but the system was too slow. The executive

director there said she was exploring the possibility of transferring to the Southwestern Emergency Response Network, which would give her greater capacity to notify area agencies in emergency situations. A complaint about many of the FEB communication systems was that they were slow or needed to be manually updated. The Dallas-Fort Worth FEB executive director noted that with the boards becoming more of a national network and serving as backups to one another, the importance of a fully supported national communication network for the FEBs is becoming even more evident.

According to OPM, the FEB role in emergency service support also includes coordination activities. For example, OPM reported that it expects the boards to serve as federal liaisons for state and local emergency officials and to assess local emergency situations in cooperation with federal, state, and local officials. Although all of the boards reported some involvement of state and local officials in their emergency activities, the degree of board connections with state and local officials varied. The Minnesota FEB and the Oklahoma FEB, for example, reported strong relationships with state and local government officials, state and local emergency management leaders, and private sector businesses. The Dallas-Fort Worth FEB executive director reported that the board partners with state and local government representatives, the private sector, law enforcement, and first responders, all of which are key players in assessing local emergency situations. On the other hand, the Chicago FEB executive director said that because Chicago is so large, the board has few established relationships with state and local officials. The chair of the Boston FEB said its board had 24-hour contact numbers for some state officials but not city officials.

In terms of coordination, the FEBs are also charged with identifying a core group of federal leaders in each community to discuss planned courses of action, such as delayed arrival and shelter in place, in the event of an emergency. All of the selected boards had some type of emergency preparedness council. In the case of the Los Angeles FEB, however, the emergency preparedness committee had to disband because of significant transportation challenges in the Los Angeles area. The board's executive director said they now have an emergency preparedness e-mail group. In addition, OPM expects the boards to provide problem resolution assistance as appropriate, to include identifying federal resources that may be available to assist the community in responding to, or recovering from, an emergency. Examples of some of the selected boards' past responses during emergencies are detailed in a section below.

OPM expects the FEBs in their capacity-building role to facilitate training for member agencies regarding their responsibilities related to occupant emergency plans, COOP planning, and other emergency preparedness topics. All of the selected FEBs reported hosting at least one emergency preparedness briefing, training, or exercise during the past year. The Minnesota FEB, for example, hosted homeland security briefings by the Federal Bureau of Investigation, the Transportation Security Administration, the Minnesota Department of Health, the Secret Service, FEMA, the Federal Protective Service, state and county emergency management directors, and the Department of Defense. The Denver FEB conducts a yearly scenario-based COOP exercise usually in conjunction with FEMA, the National Archives and Records Administration (NARA), and GSA. In addition to other preparedness exercises, the Chicago FEB hosted an exercise dealing with emergency preparedness and people with disabilities. Several FEB representatives made the point that these emergency preparedness exercises and activities are particularly valuable for the smaller federal agencies. While military, law enforcement, and public safety federal agencies may have a solid grasp of emergency preparedness, some of the smaller administrative agencies need help defining what their responsibilities are in this area. In addition, an FEB executive director and a chair said that the interagency exercises help to ensure that federal workers are receiving consistent treatment across the agencies.

FEB Representatives Reported Working with FEMA on COOP Planning

One of the FEB emergency support responsibilities is facilitating COOP training for federal agencies, and the FEB representatives reported working with FEMA and, in many cases, GSA to accomplish this. As mentioned previously, COOP planning is an effort conducted by agencies to ensure that the capability exists to continue essential agency functions across a wide range of potential emergencies. FEMA, GSA, and OPM are the three agencies that have the most direct impact on individual agency efforts to develop viable COOP capabilities. FEMA, as the lead agency for executive branch COOP planning, has responsibility for formulating guidance, facilitating interagency coordination, and assessing the status of executive branch COOP capabilities. GSA is responsible for working with FEMA in providing COOP training for federal agencies and assisting agencies in acquiring alternate facilities in the event of an emergency, while OPM is responsible for maintaining and revising human capital management guidance for emergency situations and assisting the heads of other departments and agencies with personnel management and staffing during national security emergencies.

FEB representatives said they work with FEMA and GSA to develop and strengthen agency COOP and other emergency plans. For example, most of the boards have COOP working groups or emergency committees, often lead by FEMA and GSA, which help conduct various emergency exercises. The exercises are designed to provide insight and guidance that can be used to develop specific action plans that address interruptions in services provided by their agencies, and FEB representatives said that COOP plans are tested through these exercises. A FEMA official testified in May 2006 that the COOP working groups established with the FEBs in New Orleans, Houston, and Miami prior to the hurricanes of 2005 and the many COOP training and exercise activities conducted by these organizations were instrumental in facilitating federal agency recovery and reconstitution efforts following hurricanes Katrina, Rita, and Wilma.[6] During the past year, FEMA Region III nominated the Philadelphia FEB COOP working group for a 2006 Excellence in Government Award because the group had improved the federal image of preparedness among the Philadelphia community through training, exercises, and interagency coordination projects. The group received a Silver Medal Award as a result of the nomination. As another example of joint activities, through a campaign that is a collaboration between FEMA, the Red Cross, and other emergency response groups, the Boston FEB hosted a series of seminars aimed at educating employees about home preparedness.

Almost all of the FEB executive directors or chairs from the selected boards cited a positive and beneficial working relationship with FEMA. Some of the executive directors also said that a strong relationship exists between their boards and the FEMA regional directors in their areas. In addition, the regional FEMA officials we interviewed all said the FEBs assist FEMA with its mission. Another FEMA official noted that reaching out to the field can be difficult, but the FEBs provide communications and access to the majority of federal agencies, which makes FEMA's job much easier. Although FEMA does not have a formal agreement with the FEBs, FEMA and the FEBs have common interests in making sure the federal workforce is protected, and the relationship proves mutually beneficial. According to a FEMA official, many of the agencies in the field have COOP policies, procedures, and planning in place in part because the FEBs have assisted FEMA in getting this program out to them. He noted that the FEBs carry the COOP activities forward and, although the boards operate under

[6]Statement of Robert Shea, Acting Director of Operations Federal Emergency Management Agency, House Committee on Government Reform, May 24, 2006.

tenuous conditions, their outreach is invaluable. Similar to most of the opinions expressed regarding FEMA's work with the FEBs, the Seattle FEB chair said that FEMA has displayed active leadership and has proven to be a good connection for sharing information.

FEBs Have Played a Role in Responding to Past Emergencies

The Oklahoma FEB response to the bombing of the Oklahoma City Murrah Federal Building on April 19, 1995, illustrates the role of some of the boards in aiding emergency response. The board staff knew all of the agencies in the Murrah Building; the home telephone numbers of critical staff; the city, county, and state principals in Oklahoma City; and which federal agencies were available to provide immediate relief and support. According to the Oklahoma executive director, with the information the FEB was able to provide and a blueprint of the Murrah Building, the first responders were able to determine where they might find more people after the bombing. The FEB staff also played a role in providing support to the victims and families of those who died in the bombing through activities such as arranging counseling. In addition, shortly after the disaster the Oklahoma FEB hosted a meeting with the Vice President in which local agency leaders discussed what worked well and what needed attention in recovering from the disaster.

Hurricanes Katrina and Rita represented huge disasters in the history of our nation, and according to a FEMA official, through these catastrophes the New Orleans FEB's executive director established and maintained an essential communication link between FEMA's Office of National Security Coordination (ONSC) and OPM. A FEMA official noted that many federal agencies, specifically smaller agencies or agencies with limited resources, were better prepared because of the coordination, collaboration, training, and resource sharing the New Orleans FEB was able to provide. The New Orleans FEB executive director also became part of the nation's first federal agency COOP and Reconstitution Team, made up of representatives from the New Orleans and Dallas-Fort Worth FEBs, GSA, NARA, OPM, and FEMA. Additionally, following the interruption of communications and loss of contact with federal leaders, the executive director was able to work through ONSC to locate and reestablish contact with all members of the FEB Policy Committee at their alternate sites, beginning the reconstitution of the New Orleans FEB. The FEB served as a conduit for information between Wasbington and the representative local agencies, and the Policy Committee was able to provide status updates to identify common needs or problems that agency leaders were facing that required expedited assistance to resolve. According to a FEMA official, the lessons learned during the conference calls with the New Orleans FEB

Policy Committee following Hurricane Katrina allowed for better national response and coordination during Hurricane Rita. The New Orleans FEB executive director reported that part of her role during Hurricane Katrina was to raise awareness that many of the essential personnel of the federal workforce in New Orleans had no housing and, therefore, were not able to return to work. Eventually, essential federal and local workers and members of the New Orleans police and fire departments and their families were housed aboard ships.

As another example of FEB support following hurricanes Katrina, Rita, and Wilma, FEMA Region V put into place a temporary Chicago call center that was scheduled to open in early September 2005. The call center was created in response to the projected volume of calls from victims of the disasters to enable FEMA to more effectively and rapidly communicate with them. Because of the requirement that call center staff must be fingerprinted and have security clearances, federal employees were the only ones who could immediately meet FEMA's need to staff the center. The Chicago FEB executive director coordinated with agency officials in soliciting nearly 300 federal employees who were detailed to the center while negotiations were being conducted with a contractor who would then backfill these positions. According to FEMA and the Chicago FEB, the effort in sharing federal personnel was highly successful.

During nonemergency but disruptive events, such as political conventions or rallies, the FEBs in the affected areas have helped to contain the potential disturbance for federal agencies' operations. For example, the FEB representatives from Boston and New York City said their boards played a role during the national political conventions held there in the summer of 2004. In preparation for the events, OPM conducted a series of emergency preparedness seminars for local agency representatives through the FEBs in both cities. The sessions provided information on emergency planning and human resource flexibilities available to agencies for use in emergency situations and during major public events and were designed to prepare all federal agencies for emergencies, both natural and man-made. In addition, OPM gave the Boston FEB vice chair and the New York City chair onetime authority during the event to make decisions regarding the nonemergency workforce should that become necessary. As another example, during the immigration rallies in the summer of 2006 in Chicago, the Chicago FEB reported that it was communicating with the Federal Protective Service, which shared security information with the board. The Chicago FEB was able to pass this information on to the local agencies so employees could prepare and make alternative travel arrangements since some streets were closed.

The FEBs Face Key Challenges in Providing Emergency Support Services

The distinctive characteristics of the FEBs within the federal government help to explain the key challenges the boards face in providing emergency support services. Factors including the boards' lack of a defined role in national emergency support structures, their accountability framework, and the differences in their capacities present challenges in providing a needed level of emergency support across the FEB service areas.

A Defined FEB Role in National Emergency Plans Would Better Ensure That the Boards Can Effectively Carry Out Their Emergency Support Role

According to several FEMA officials we interviewed, the FEBs could carry out their emergency support role more effectively if their role was included in national emergency management plans. FEMA officials from two different regions with responsibility for emergency activities in 11 states said they felt the boards could be used more effectively and that they add value to the nation's emergency operations. They agreed with several of the FEB executive directors we interviewed who felt the boards lacked recognition within the federal government's emergency response structure and that their value in emergency support was often overlooked by federal agency officials unfamiliar with their capabilities. A FEMA regional director noted that it is very important that the FEB emergency support role is understood, and he believed including the boards in emergency management plans was an opportunity to communicate the role of the FEBs and how they could contribute in emergencies involving the federal workforce.

The FEMA officials provided examples of areas where the FEBs could support the existing emergency response structure and where the boards' role could be defined in emergency management plans. For example, while FEBs are not first responders, the National Response Plan's[7] emphasis on local emergency response suggests using the existing local connections and relationships established by the FEBs. The National Response Plan is also intended to provide a framework for how federal departments and agencies will work together and coordinate with state, local, tribal, private sector, and nongovernmental organizations during incidents through the establishment of several multiagency coordination structures. Among other activities, these coordination structures are

[7]The National Response Plan is designed to provide the structure for the coordination of federal support for disaster response with a basic premise that incidents are generally handled at the lowest jurisdictional level possible. State and local resources provide the first line of emergency response and incident management support.

responsible for maintaining situational awareness,[8] information sharing, and communications; coordinating internal operations; and coordinating among the different entities. The FEMA officials agreed that the FEBs could provide support to the existing emergency response structure via these multiagency coordination centers, given the FEBs' connections and knowledge of their local communities. The boards could provide real-time information to the centers and have access to status reports that they could share with high-level federal officials within their service areas during an emergency affecting the federal workforce.

FEMA officials had specific suggestions for where formal inclusion of the FEBs should be considered in multiagency coordination centers. One official noted that when a disaster threatens the federal community, it would be advantageous for the FEB to have a seat in the joint field office (JFO). A JFO is a temporary federal facility established locally to coordinate operational federal assistance activities to the affected areas during incidents of national significance. Within the JFO, senior federal representatives form a multiagency coordination entity and direct their staff in the JFO to share information, aid in establishing priorities among incidents and associated resource allocation, and provide strategic coordination of various federal incident management activities. The reasoning behind the suggestion to include the FEBs was that the boards have knowledge of the departments and agencies in their cities, making them able to assess the status of the local federal community affected by the disaster. According to the same official, another place for the FEBs to contribute that merits consideration is the regional response coordination center, which coordinates regional response efforts, establishes federal priorities, and implements local federal program support until a JFO is established.

FEMA officials also suggested that the FEBs could maintain the vital records related to COOP, such as alternative COOP sites, phone numbers, and emergency contacts. FEMA officials proposed that FEMA could

[8]See GAO, *Homeland Security: Opportunities Exist to Enhance Collaboration at 24/7 Operations Centers Staffed by Multiple DHS Agencies*, GAO-07-89 (Washington, D.C.: Oct. 20, 2006). This report described situational awareness as a continual process of collecting, analyzing, and disseminating intelligence, information, and knowledge to allow organizations and individuals to anticipate requirements, react effectively, and establish a common operational picture. Additionally, situational assessment includes the evaluation and interpretation of information gathered from a variety of sources that when communicated to emergency managers and decision makers, can provide a basis for incident management decision making.

provide technical assistance to the FEBs to develop a COOP directory format containing the specific information for their member agencies, while the FEBs would be responsible for maintaining, updating, protecting, and distributing the directory. FEMA officials also suggested that it may be helpful for the FEBs and FEMA to draft a memorandum of understanding that formalizes the role and responsibilities of the FEBs in assisting FEMA with COOP and other emergency activities.

The need for formal agreements on emergency roles and responsibilities has been highlighted in our previous work.[9] For example, in assessing the response to Hurricane Katrina, we recommended that it was important for FEMA and the Red Cross to clarify their respective roles and responsibilities. In May 2006, the two organizations entered into a memorandum of understanding that outlines their areas of mutual support and cooperation in disaster response and recovery operations and in performance of their respective roles under the National Response Plan.

The Operational Framework for the Boards Poses Accountability Challenges

According to OPM, leadership and oversight of the FEBs is conducted from OPM Headquarters in Washington, D.C. Although the FEB regulations state that the chairs of the FEBs should report to OPM through regional representatives, who were charged with overseeing the activities of their FEBs, an OPM official explained that the regional oversight these regulations refer to is now done from headquarters. Within OPM, the Associate Director for Human Capital Leadership and Merit System Accountability (HCLMSA) supervises the Director for FEB Operations. Within the HCLMSA division, the field services group managers are intended to serve in a liaison and support role with the FEBs in their geographic areas. An OPM official said there are five field service managers who interact with the FEBs in their jurisdictions. While the official said the managers are not expected to provide oversight of FEB activities, they are expected to regularly attend FEB executive board meetings and help coordinate OPM-provided training. Some FEB representatives reported that their OPM field service managers were active in their FEBs, while others said their managers were not.

[9]See, for example, GAO, *Results-Oriented Government: Practices That Can Help Enhance and Sustain Collaboration among Federal Agencies*, GAO-06-15 (Washington, D.C.: Oct. 21, 2005), and *Hurricanes Katrina and Rita: Coordination between FEMA and the Red Cross Should Be Improved for the 2006 Hurricane Season*, GAO-06-712 (Washington, D.C.: June 8, 2006).

In light of the recent emphasis on systemwide expectations and accountability measures for the boards, many of the FEB representatives we interviewed believed OPM needs to provide additional leadership and feedback to them. The relationship between OPM and the FEBs is complicated, in part because the boards need a certain level of autonomy to address regionally identified issues through projects and programs specific to their localities. More recently, however, particularly with the emergency support expectations for the boards that cut across the FEB system, many of the FEB representatives felt more assistance and feedback from OPM on FEB activities are warranted. Many were frustrated with what they perceived as a lack of priority given to the boards by OPM. For example, some noted that the Director of FEB Operations is a one-person office, which they felt was inadequate to meet the needs of and provide oversight for the 28 boards. Several of the FEB representatives also pointed to a recent incident where the FEB system's host Web site server, contracted out by OPM, was defaced. Service was not restored to some of the FEB Web sites until several weeks later.

The accountability structure for the FEB executive directors poses additional challenges. An OPM official reported that the executive directors are rated by their supervisors of record in their host agencies. In 2004, OPM worked with the FEB executive directors to develop critical performance standards to be used by the FEB chairs to provide input to the host agency supervisors on the performance of the FEB executive directors. Executive directors were asked by OPM to use the standards to solicit input from their FEB chairs for their performance evaluations, although there is no provision to ensure the performance standards are consistently applied among the individual director ratings. Of the 14 selected boards, 5 boards had an arrangement where the performance appraisal was done by the host agency supervisor who received performance appraisal input from the FEB chair. Four executive directors reported they were rated by their host agencies with no input from the FEB chairs, while for four of the executive directors, the chair provided the executive director's rating to the host agency. One executive director did not receive a performance appraisal because she was still considered an employee of one agency even though her salary was paid by another agency.

Some of the executive directors we interviewed said that under their current accountability structure, they answer to OPM, the chair or policy committee of the FEB, and the board's host agency, which generally pays their salaries. When asked about accountability, some of the executive directors said they would follow the host agency's guidance given that

their salaries were paid by them. Others said they would answer primarily to their chairs or policy committees. One of the FEB representatives noted that he believes the current performance system does not reward high-performing FEBs.

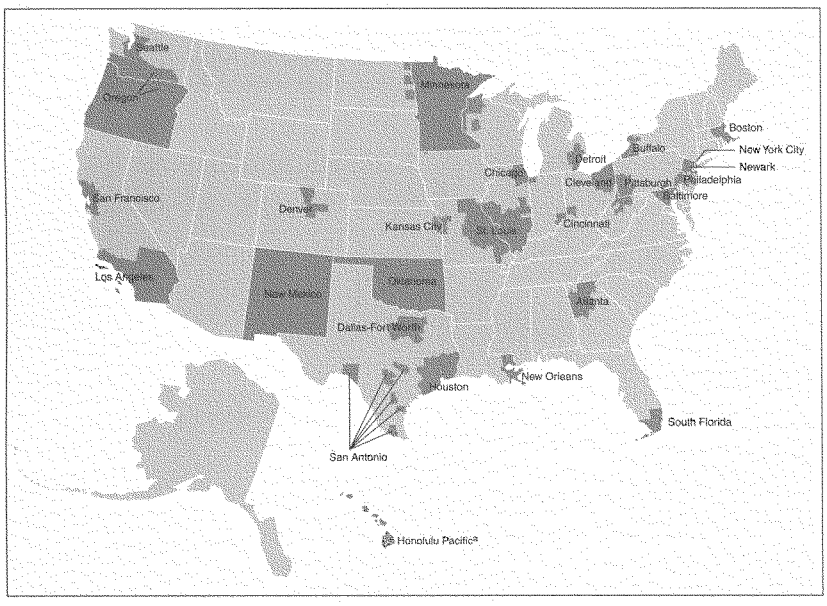
Varying FEB Capacities Test the Boards' Ability to Provide Consistent Levels of Emergency Support Services across the Country

As we reported in 2004, the context in which the FEBs operate, including varying capacities among the boards for emergency preparedness efforts, could lead to inconsistent levels of preparedness across the nation.[10] Figure 2 illustrates that the service areas of the FEBs differ substantially in the size of their formal jurisdictions, and table 1 shows how the number of federal employees[11] and agencies served by each board varies. These factors may affect a board's capacity to provide emergency support. For example, FEB representatives from Chicago and Los Angeles said their locations in large cities made providing FEB emergency support services for their service areas more difficult. The Los Angeles executive director, for example, noted that the Los Angeles FEB primarily serves a six-county area in the immediate vicinity of Los Angeles with notable transportation problems. This makes in-person meetings a challenge. The service area includes approximately 120,000 federal employees from 230 different agencies. Yet the executive director noted that the FEB's staffing is similar to that of FEBs covering much smaller areas and numbers of employees and agencies. The Cincinnati FEB, in contrast, covers approximately 15,000 federal employees from 90 different agencies. Appendix III lists the 28 FEBs along with their host agencies.

[10]GAO-04-384.

[11]The figures include military employees.

Figure 2: Jurisdictional Boundaries of the 28 FEBs



Source: GAO presentation of OPM information.

[a]Includes civilian agencies in Guam.

Table 1: Number of Federal Employees and Agencies Served by Each FEB in Descending Order of Employees Served

FEB	Federal employees served	Number of federal agencies
Los Angeles	118,250	230
San Antonio	91,130	68
Oklahoma	78,681	252
Honolulu-Pacific	72,155	96
San Francisco	70,000	150
Baltimore	69,488	140
Chicago	64,803	180
St. Louis	62,155	82
New York City	61,578	152
Atlanta	58,020	120
Dallas-Fort Worth	49,855	144
Philadelphia	48,238	154
Seattle	47,233	147
Boston	45,479	150
Denver	39,161	160
Kansas City	38,906	134
Newark	38,270	79
Minnesota	35,806	120
South Florida	35,672	129
Detroit	32,733	85
New Mexico	32,102	94
Oregon	31,000	225
Houston	29,419	115
Cleveland	25,842	91
Pittsburgh	24,898	107
New Orleans	20,141[a]	71[a]
Buffalo	15,935	100
Cincinnati	14,727	90

Source: OPM.

[a]Numbers are under review because of Hurricane Katrina.

There is no consistency for funding the FEBs nationwide, and the levels of support provided to the boards in terms of operating expenses, personnel, and equipment vary considerably. For example, some of the executive directors reported they received an operating budget allocation for travel

and supplies, while others said they received nothing or very little in this regard. Without adequate and consistent levels of funding and resources across the FEB system, some FEB representatives we interviewed were skeptical as to whether any standardization of emergency activities could be implemented.

The FEBs' dependence on host agencies and other member agencies for their resources also creates uncertainty for the boards in planning and committing to provide emergency support services. The lack of funding in a particular year may curtail the amount of emergency support an individual board could provide. Many of the FEB representatives characterized the board funding structure as dysfunctional, and some expressed concern that their activities will be further affected by reduced agency funding and resource support as agency budgets grow more constrained. When boards' funding is precarious, the executive directors spend the majority of their time soliciting resources from member agencies, without adequate time or resources to focus on mission-related activities. Federal agencies that have voluntarily funded FEB positions in the past have begun to withdraw their funding support. Of our 14 case study boards, representatives from 3 of the boards said they had recently had their host agencies withdraw funding for their boards' executive assistant positions. Several FEB representatives felt the uncertainty about the funding of the FEBs raises questions as to the survivability of the system and its ability to fulfill its emergency support function.

Recognizing that the capacities of FEBs vary across the nation, OPM established an internal working group in August 2003 to study the strengths and weaknesses of the boards. According to OPM, the working group reviewed funding and staffing levels for possible recommeudations of funding enhancements in challenged areas and developed several products to assist OPM in communicating the value of the FEBs to agencies. In 2006, OPM proposed a three-part plan, including restructuring the network of 28 boards to try to address the resource issues of some of the boards by combining them with other boards. Federal population numbers and geographic proximity of existing FEBs were used to develop the proposed structure, which reduced the 28 boards into a system of 21 boards. The majority of the FEBs did not support the restructuring component of the plan, asserting that the proposal was not well developed and stressing the importance of maintaining local presence for FEB operations and activities in the current locations. OPM decided not to pursue the approach. However, OPM officials said they will revisit restructuring the FEB network if resource issues remain a problem.

There have been different options considered for FEB funding in the past. For example, in 1988, OPM developed a budget proposal to include in its fiscal year 1990 budget submission base dollars and full-time equivalents to fully fund the FEBs. Ultimately, OPM reported only receiving a fraction of the money requested, and OPM did not request additional funding for the next fiscal year. OPM has not requested funding of this type for the FEBs since that time. The current funding arrangements continue to emphasize local agency responsibility whereby usually one major department or agency in each city provides funding for an executive director and an assistant, although other federal agencies can contribute. OPM officials said they continue to support local agency commitment to the FEBs. From OPM's vantage point, the boards that have developed strong relationships with their partner agencies have more success securing the necessary resources within existing funding arrangements. Although OPM officials stated they play an integral role in facilitating discussions to resolve FEB funding issues, some of the FEB representatives reported that OPM told them that if any of the FEBs encountered funding difficulties, the boards were on their own to solve the problems since the FEBs were unwilling to accept OPM's restructuring proposal.

The problem of unstable resources is one that could affect any networked organization similar to the FEBs that relies, more or less, on voluntary contributions from members. Agencies may be reluctant to contribute resources to an initiative that is not perceived as central to their responsibilities, especially during periods of budgetary constraints. This reluctance may, however, limit the long-term investment of the federal government in working more collaboratively. For example, we recently reported on the Joint Planning and Development Office (JPDO), a congressionally created entity designed to plan for and coordinate a transformation from the current air traffic control system to the next generation air transportation system by 2025.[12] Housed within the Federal Aviation Administration, JPDO has seven federal partner agencies. One of the greatest challenges that JPDO officials cited was creating mechanisms to leverage partner agency resources. Although leveraging efforts have worked well so far, we noted that JPDO could face difficulties in securing needed agency resources if the priorities of the partner agencies change

[12]GAO, *Next Generation Air Transportation System: Progress and Challenges Associated with the Transformation of the National Airspace System*, GAO-07-25 (Washington, D.C.: Nov. 13, 2006).

over time. This has been a long-standing problem for the FEBs as well. In a 1984 report, we concluded that although the FEBs have contributed to improved field management, the future of the boards was uncertain because funding for staff and board participation had declined.[13] Similar to the boards' current situation, in 1983, five FEBs lost all or part of their staff support as agency budgets grew more constrained.

In Canada, the federal government has adopted a mix of both central funding and departmental contributions for its regional coordinating entities. Regional federal councils, the Canadian equivalent of the FEBs, are sustained by a balance between central funding and departmental contributions at the local level. The role of the councils was the subject of in-depth consideration by Canadian government officials in 1996, and at that time, the Treasury Board increased the level of support it provided to the councils, including central funding to support staff positions and some operating expenses. A 2000 report on the councils concluded that a balance between central funding and departmental contributions at the local level may well be the model best suited to financially sustain the councils.[14]

Although OPM and the FEBs are now involved in a strategic planning effort, OPM has not to date considered the resource requirements to support an expanded emergency support role for the FEBs. Yet, as we have pointed out in our previous reports, a strategic plan should include a description of the resources—both sources and types—that will be needed for the strategies intended to achieve the plan's goals and objectives.

[13]GAO, *Federal Executive Boards Contribute To Improved Field Management But Future Is Uncertain*, GAO/GGD-84-31 (Washington, D.C.: Mar. 6, 1984).

[14]Treasury Board of Canada Secretariat, *Regional Federal Councils*, January 2000.

The Nature of Pandemic Influenza May Make the FEBs a Particularly Valuable Asset in Pandemic Preparedness and Response

Despite the challenges the FEBs face in providing emergency support, their potential to add value to the nation's emergency preparedness and response is particularly evident given an event like pandemic influenza. The distributed nature of a pandemic and the burden of disease across the nation dictate that the response will be largely addressed by each community it affects. Using their established and developing community relationships to facilitate communication and coordination with local federal agency leaders and state and local governments, FEBs are well positioned to assist in pandemic preparedness and response. In the current pandemic planning stages, many of the selected FEBs were already acting as conveners, hosting pandemic influenza preparedness events, such as briefings and training and exercises, and were considering how federal agencies could share resources during a pandemic.

Pandemic Influenza Preparedness and Response Present Different Concerns Than Localized Natural Disasters

According to the Homeland Security Council, the distributed nature of a pandemic, as well as the sheer burden of disease across the nation, means that the physical and material support states, localities, and tribal entities can expect from the federal government will be limited in comparison to the aid it mobilizes for geographically and temporarily bounded disasters like earthquakes and hurricanes. Unlike those incidents that are discretely bounded in space or time, an influenza pandemic could spread across the globe over the course of months or over a year, possibly in waves, and would affect communities of all sizes and compositions. While a pandemic will not directly damage physical infrastructure, such as power lines or computer systems, it threatens the operation of critical systems by potentially removing the essential personnel needed to operate them from the workplace for weeks or months.

The Homeland Security Council issued two documents to help address the unique aspects of pandemic influenza. The November 2005 National Strategy for Pandemic Influenza is intended to guide the overall effort to address the threat and provide a planning framework consistent with the National Security Strategy and the National Strategy for Homeland Security. This planning framework is also intended to be linked with the National Response Plan. In May 2006, the Homeland Security Council also issued the Implementation Plan for the National Strategy for Pandemic Influenza. This plan lays out broad implementation requirements and responsibilities among the appropriate federal agencies and also describes expectations for nonfederal stakeholders, including state and local governments, the private sector, international partners, and individuals. Further, all federal agencies are expected to develop their own pandemic plans that along with other requirements, describe how each agency will

provide for the health and safety of its employees and support the federal government's efforts to prepare for, respond to, and recover from a pandemic.

The Implementation Plan for the National Strategy for Pandemic Influenza states that the greatest burden of the pandemic response will be in the local communities. Local communities will have to address the medical and nonmedical effects of pandemic influenza with available resources. The implementation plan maintains that it is essential for communities, tribes, states, and regions to have plans in place to support the full spectrum of their needs over the course of weeks or months, and for the federal government to provide clear guidance on the manner in which these needs may be met. As pandemic influenza presents unique challenges to the coordination of the federal effort, joint and integrated planning across all levels of government and the private sector is essential to ensure that available national capabilities and authorities produce detailed plans and response actions that are complementary, compatible, and coordinated.

FEBs' Unique Role in the Local Federal Community Can Aid in Pandemic Influenza Preparedness and Response

Research has shown that systems like the FEBs have proven to be valuable public management tools because they can operate horizontally, across agencies in this case, and integrate the strengths and resources of a variety of organizations in the public, private, and nonprofit sectors to effectively address critical public problems, such as pandemic influenza.[15] Government leaders are increasingly finding that using traditional hierarchical organizations does not allow them to successfully address complex problems. As a result, they are beginning to explore the use of collaborative networks that reach across agencies and programs.

The boards bring together the federal agency leaders in their service areas and have a long history of establishing and maintaining communication links, coordinating intergovernmental activities, identifying common ground, and building cooperative relationships. Documents supporting the establishment of the FEBs noted that it is important that field executives have a broader picture of government and a general understanding of the interrelationships of government activity. The boards also partner with

[15]See, for example, GAO-06-15, and Donald P. Moynihan, *Leveraging Collaborative Networks in Infrequent Emergency Situations* (Washington, D.C.: IBM Center for the Business of Government, June 2005).

community organizations and participate as a unified federal force in local civic affairs. This connection to the local community could play a role in pandemic influenza preparedness and response as predisaster relationship building and planning are often the cornerstones to incident management.

Many of the selected FEBs cultivated relationships within their federal, state, and local governments and their metropolitan area community organizations as a natural outgrowth of their general activities. For example, FEB activities, such as the Combined Federal Campaign and scholarship programs, brought the boards into contact with local charities and school boards. In addition, through activities such as hosting emergency preparedness training or through participation in certain committees, some of the selected FEBs reported a connection with emergency management officials, first responders, and health officials in their communities. Through their facilitation of COOP exercises and training, the FEBs bring together government leaders, health officials, and first responders in a venue where the parties can share ideas, discuss plans, and coordinate approaches. The San Francisco FEB executive director and chair said they attend FEMA's Regional Interaction Steering Committee meetings, which brought them in contact with federal, state, and local government emergency management partners. The Minnesota FEB plays an active role in both the Association of Minnesota Emergency Managers (AMEM) and the Metropolitan (Twin Cities) Emergency Managers Association. The Minnesota FEB executive director, for example, serves on the AMEM board of directors as federal agency liaison, a newly created partnership with the organization. As another example, the Oklahoma FEB partnered with the fire departments in Oklahoma City and Tulsa to provide site visits to the federal agencies there to help strengthen emergency preparedness plans and update evacuation and shelter-in-place plans. The executive director said the site visits also provided agency leaders with the opportunity to interact with the most likely first responders in the event of an emergency and to obtain valuable information to include in emergency preparedness plans.

As with the boards' emergency support role in general, some of the FEB representatives envisioned their boards taking a more active role in pandemic influenza preparedness and response than others did. While some FEB representatives stressed the unique characteristics of the boards that position them to help prepare and respond to pandemic influenza, others noted the boards' limited staffing and resources. One FEB executive director remarked that although the boards have no real authority, they are valuable because of the community relationships they have forged and their unique ability to coordinate resources and

communicate. As previously discussed, several representatives were concerned, however, about the role the FEBs could play in the event of a large-scale emergency, such as an influenza pandemic.

FEBs Are Acting as Conveners to Deliver Planning and Training Needed for Pandemic Influenza Preparedness and Have a Potential Role in Pandemic Response

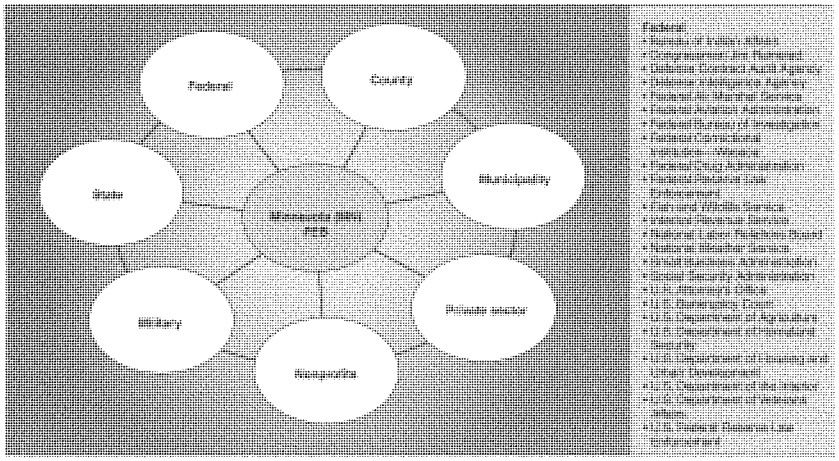
In terms of current pandemic planning, many of the selected FEBs were building capacity for pandemic influenza response within their member agencies and community organizations by hosting pandemic influenza training and exercises. The Implementation Plan for the National Strategy for Pandemic Influenza highlights training and exercises as an important element of pandemic planning. For example, 13 of the 14 selected FEBs were involved in pandemic influenza-related activities that ranged from informational briefings to coordinating pandemic exercises, some that included nonprofit organizations, the private sector, and government. The one exception was the New Orleans FEB, where the executive director said the board is still too heavily involved with Hurricane Katrina recovery to focus on helping agencies to collaborate on pandemic influenza preparedness.

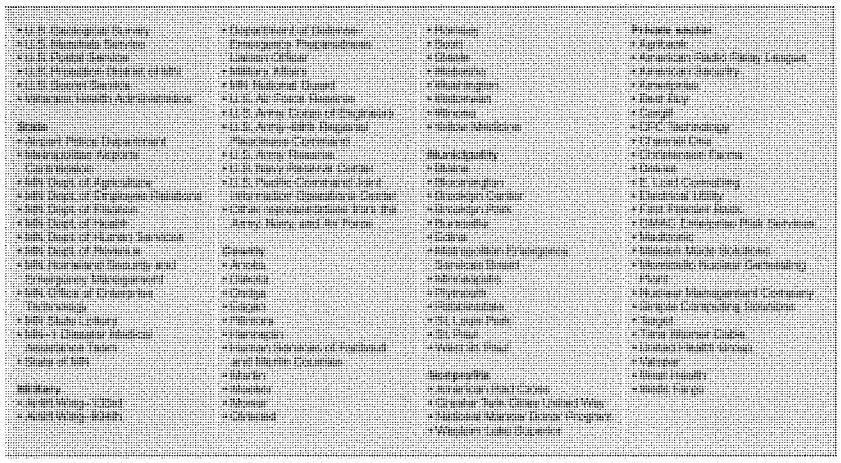
A number of the selected FEBs have held pandemic influenza tabletop exercises. A pandemic influenza tabletop exercise would be based on a fictitious account of a plausible outbreak of pandemic influenza with scenarios constructed to facilitate problem solving and to provoke thinking about gaps and vulnerabilities. The Boston FEB, together with the Massachusetts Emergency Management Agency and FEMA, held a pandemic influenza tabletop exercise in November 2006. The exercise objectives included goals such as helping to increase the awareness of federal, state, local, and tribal government agencies of the requirement to incorporate pandemic influenza procedures into COOP planning and identifying special considerations for protecting the health and safety of employees and maintaining essential government functions and services during a pandemic outbreak. In addition, the Baltimore FEB hosted a pandemic influenza exercise on November 1, 2006, facilitated by FEMA Region III and the Maryland Emergency Management Agency. The Seattle FEB, with the assistance of FEMA and the City of Seattle, sponsored an all-day conference in October 2006 called Pandemic Flu: Get Smart, Get Ready! Conversation Tools and Tips.

The Minnesota FEB has been a leader among the boards in pandemic influenza planning. Using a tabletop exercise it created, the board hosted its first pandemic influenza exercise in February 2006, with a follow-up exercise in October 2006. The October exercise included approximately 180 participants from 100 organizations within federal agencies, state and

local government, and the private sector. Figure 3 illustrates the breadth of participation in the exercises, including key infrastructure businesses such as power and telecommunications. The Minnesota FEB executive director noted that Minnesota has excellent state and local government relationships, which help to facilitate planning of this nature. Examples of partnerships the board has with state and local entities include those with the State of Minnesota Division of Homeland Security and Emergency Management, the Minnesota Department of Health, the St. Paul Chamber of Commerce, and the American Red Cross.

Figure 3: Participants in Two Minnesota FEB Pandemic Tabletop Exercises





Source: GAO presentation of MN FEB information.

The *Implementation Plan for the National Strategy for Pandemic Influenza* emphasizes that government and public health officials must communicate clearly and continuously with the public throughout a pandemic. The plan recognized that timely, accurate, credible, and coordinated messages will be necessary. According to many of the FEB representatives we interviewed, the communications function of the boards is a key part of their activities and could be an important asset for pandemic response. For example, when asked about the role they envision the FEBs playing in the response to a pandemic, the Dallas-Fort Worth FEB representatives said that because the board is viewed by its member agencies as a credible source of information, the board's role should be to coordinate communications among member agencies. They gave the example of the Department of Health and Human Services working through the board to disseminate medical information to their local community.

In addition to their communications role, during pandemic influenza the FEBs have the potential to broaden the situational awareness of member agency leaders and emergency coordinators and provide a forum to inform their decisions, similar to what the FEBs provide for other hazards, such as inclement weather conditions. A FEMA official noted that FEBs have vital knowledge of the federal agencies in their jurisdictions, which can provide valuable situational awareness to community emergency responders.

Some of the FEBs were also considering the role they can play in assisting member agencies by supporting human capital functions, such as supporting the federal workforce and coordinating the deployment of personnel among member agencies as may be appropriate. Several FEB representatives said, for example, that they were considering how they could provide assistance in coordinating support to federal agencies responding to pandemic influenza, such as addressing personnel shortages by locating available resources among member agencies. Other FEB representatives we interviewed reiterated a theme that even the critical federal employees in the field can be left to fend for themselves when disasters strike their communities. Consequently, they are not able to handle the emergency issues of the federal government. For example, according to the New Orleans executive director, in New Orleans after Hurricane Katrina the oil and gas workers had their companies as powerful advocates in securing housing for them so they could resume working. She reported that in sharp contrast, there was no entity nationally that was an advocate for the local federal workforce to ensure the speedy reconstitution of essential services. In the majority of cases, she said that essential federal employees queued up for temporary housing in long lines. She intervened to bring attention to the need for expedited temporary housing for federal employees, who were responsible for providing essential functions, but who were also victims of the disaster.

To avoid a similar situation during pandemic influenza, the Minnesota and Oklahoma FEBs are trying to negotiate with their states to create memorandums of agreement between the states and the federal agencies, represented by the FEBs. Their objectives are to identify how medical supplies and vaccines from the Advanced Pharmaceutical Cache (APC) or the Strategic National Stockpile, which will be distributed by the states, will be dispersed to essential federal government employees in the event of a pandemic or bioterrorist attack. To accomplish this, the FEBs are working with their federal members to apply the states' guidelines for vaccine priorities to the federal workforce in their areas of service so that essential federal employees, such as air traffic controllers, federal law

enforcement officers, and correctional facilities staff, are appropriately integrated in the state vaccine distribution plans. They also want to identify federal agencies and their resources that can augment the states' operation of the mass vaccine dispensing sites. The Minnesota FEB has inventoried all of the federal agencies within its jurisdiction and feels it has a good idea of the resources that will be needed. According to the Minnesota FEB executive director, however, Minnesota currently does not have enough medical supplies, pharmaceuticals, and vaccines in its APC to cover the emergency personnel of the federal government in Minnesota nor does it have the resources for purchasing these supplies.

Conclusions

Achieving results for the nation increasingly requires that federal agencies work with each other and with the communities in which they serve. The federal executive boards are uniquely able to bring together federal agency and community leaders in major metropolitan areas outside Washington, D.C., to meet and discuss issues of common interest, such as preparing for and responding to pandemic influenza. As we reported in 2004, such a role is a natural outgrowth of general FEB activities and can add value in coordinating emergency operations efforts.

Several interrelated issues limit the capacity of FEBs to provide a consistent and sustained contribution to emergency preparedness and response. These issues may present limitations to other areas of FEB activities, not solely to emergency preparedness. Among them are the following:

- The role of the FEBs in emergency support is not defined in national emergency guidance and plans.
- Performance standards, for which the boards will be held accountable, with accompanying measures, are not fully developed for FEB emergency support activities.
- The availability of continuing resource support for the FEBs is uncertain and the continued willingness of host and member agencies to commit resources beyond their core missions may decrease, especially in times of increasing budgetary constraints.

While the FEBs and FEMA have established important working relationships in a number of locations, these have, to date, been largely informal. As FEMA officials have noted, including the FEBs in federal emergency guidance and plans provides an opportunity for the FEBs to leverage the network of community relationships they have already established. OPM and FEMA could formalize the FEBs' contribution to

FEMA's emergency preparedness and response efforts through a memorandum of understanding, or some similar mechanism, between FEMA and the FEBs, and a formal designation of the FEB role in FEMA guidance. Likewise, recognition of the FEB emergency support role in the national emergency structure could help the boards carry out their emergency support role more effectively by underscoring the value they add, which may be overlooked by federal agency officials unfamiliar with their capabilities.

The ability of FEBs and organizations like them to fulfill important collaborative national missions is hampered if they are dependent on the willingness of host agencies to provide support. OPM has determined that the FEBs should have an important and prominent role in emergency support and envisions a set of emergency support activities across the FEB system. The current structure of host agencies and in-kind contributions puts at risk the achievement of that goal.

OPM's work on a strategic plan with the FEBs affords the opportunity to complete the development of clear expectations for the FEBs in emergency operations and to develop appropriate performance measures for these expectations. OPM also has an opportunity, as part of this planning process, to consider alternative funding arrangements that would better match the roles envisioned for the FEBs. As noted earlier, a strategic plan should describe how goals and objectives are to be achieved, including how different levels of resources lead to different levels of achievement and the sources of those resources.

Recommendations for Executive Action

Consistent with OPM's ongoing efforts in this regard, we recommend that the Director of OPM take the following four actions to help improve the ability of the FEBs to contribute to the nation's emergency preparedness efforts, particularly given the threat of pandemic influenza:

- Once OPM completes defining emergency support expectations for the FEBs, OPM should work with FEMA to develop a memorandum of understanding, or some similar mechanism, that formally defines the FEB role in emergency planning and response.
- OPM should initiate discussion with DHS and other responsible stakeholders to consider the feasibility of integrating the FEB emergency support responsibilities into the established emergency response framework, such as the National Response Plan.
- OPM should continue its efforts to establish performance measures and accountability for the emergency support responsibilities of the FEBs

before, during, and after an emergency event that affects the federal workforce outside Washington, D.C.

- As an outgrowth of the above efforts and to help ensure that the FEBs can provide protection of the federal workforce in the field, OPM, as part of its strategic planning process for the FEBs, should develop a proposal for an alternative to the current voluntary contribution mechanism that would address the uncertainty of funding sources for the boards.

Agency Comments

We provided the Director of OPM and the Secretary of Homeland Security a draft of this report for review and comment. We received written comments from OPM, which are reprinted in appendix IV. While not commenting specifically on the recommendations, OPM stated that it understands the importance of the issues raised in the report, noting that it is building the boards' capacity by developing a national FEB strategic and operational plan that will ensure consistent delivery of services across the FEB network. By documenting results and creating a consistent accountability mechanism, OPM said it is building a strong business case through which it can address the resources FEBs need to continue operations. OPM also stated that it believed institutionalized relationships with strategic partners like FEMA can demonstrate FEBs' business value and help address ongoing funding issues. In comments received from FEMA by e-mail, FEMA concurred with the findings of the report and welcomed the opportunity to work with OPM to develop a memorandum of understanding that more formally defines the FEB role in emergency planning and response. FEMA also recognized the current personnel and budget limitations of the FEBs in supporting emergency planning and response activities and said that a proposal for an alternative to the current FEB voluntary contribution mechanism should assist with providing an improved capability for the boards.

We are sending copies of this report to the Director of OPM and the Secretary of Homeland Security and appropriate congressional committees. We will also provide copies to others upon request. In addition, the report will be available at no charge on the GAO Web site at http://www.gao.gov.

If you or your staff members have any questions about this report, please contact me at (202) 512-6806 or steinhardtb@gao.gov. Contact points for our Offices of Congressional Relations and Public Affairs may be found on the last page of this report. GAO staff who made major contributions to this report are listed in appendix V.

Bernice Steinhardt

Bernice Steinhardt
Director, Strategic Issues

Appendix I: Objectives, Scope, and Methodology

The objectives of our review were to

- identify the actions the federal executive boards (FEB) have taken to fulfill their emergency preparedness and response roles and responsibilities,
- describe the key challenges facing the FEBs in fulfilling these roles and responsibilities, and
- evaluate the extent to which the FEBs can contribute to emergency preparedness and response to pandemic influenza.

To address these objectives, we reviewed FEB annual reports and academic literature as well as prior GAO reports about leveraging collaborative networks. Additionally, we reviewed the National Response Plan, Implementation Plan for the National Strategy for Pandemic Influenza, and the Joint Field Office Activation and Operations Interagency Integrated Standard Operating Procedure to assess the feasibility of FEB involvement in those plans. We interviewed Office of Personnel Management (OPM) officials, and we consulted with three GAO field office managers who are members of their local FEBs to gain a greater understanding of FEB activities. We selected 14 of the 28 FEBs for more detailed review. Atlanta, Baltimore, Boston, Chicago, Dallas-Fort Worth, Denver, Los Angeles, New York City, Oklahoma, Philadelphia, San Francisco, and Seattle were selected because they are 12 of the 15 largest FEBs in terms of number of federal employees served. Minnesota was selected because it is considered a leader in pandemic influenza planning, and New Orleans was selected because of its recent emergency management experience with Hurricane Katrina. GAO headquarters and field office teams interviewed at least two key FEB representatives, including the chair or vice chair and the executive director from the 14 selected boards. Additionally, we obtained and reviewed FEB documents, such as annual reports, monthly activity reports, minutes, and correspondence, at the selected sites. Because our selection of FEBs was nonprobabilistic, the results of our review of these selected FEBs are not generalizable to all other FEBs. However, the challenges and issues that were identified in our coverage of half of all FEBs along with our review of materials concerning the FEBs as a group suggests that these matters are not limited to just the selected FEBs.

OPM provided data on the counties of jurisdiction for all of the boards as well as their host agencies and the number of federal and military employees and agencies in each service area. We determined these data were sufficiently reliable for the purposes of this report.

We also interviewed Federal Emergency Management Agency (FEMA) officials at their headquarters in Washington, D.C. FEMA serves as the Department of Homeland Security's designated lead agent for continuity of operations (COOP) plans for the FEBs' executive branch members. Because the FEBs and FEMA collaborate on COOP activities in the field, we interviewed the FEMA regional directors in regions V and VI based in Chicago, Illinois, and Denton, Texas, respectively, to obtain an outside perspective of the boards and their role in emergency operations. Our analysis of the capacity of FEBs to support emergency preparedness is drawn from our collective review and assessment of information and documents provided to us by officials from OPM and FEMA and the FEB representatives at the selected FEBs as well as our examination of the relevant literature described above.

Our review was conducted from March 2006 through February 2007 in accordance with generally accepted government auditing standards.

Appendix II: Office of Personnel Management Document Describing the FEB Role and Responsibilities in Emergency Situations

ROLE: PROVIDE EMERGENCY LIAISON AND COMMUNICATIONS - FEBs stand ready to provide timely and relevant information to support emergency preparedness and response coordination.

Emergency Preparedness

-FEBs will serve as a Federal liaison for State and Local emergency officials.

-FEBs will establish notification networks and develop a protocol (Communications Plan) to be used in nonemergency and emergency situations.

-FEBs will disseminate relevant information received from OPM/DC regarding emergency preparedness information (memorandums from OPM officials, emergency guides, training opportunities, information from other departments/agencies, etc.)

-FEBs will identify a core group of Federal leaders in each community who will meet regularly to discuss planned courses of action (delayed arrival, early dismissal, shelter in place, emergency personnel only, etc.) in the event of an emergency.

-FEBs will survey and/or facilitate training for member agencies regarding their roles and responsibilities related to occupant emergency plans.

-FEBs will facilitate training on Continuity of Operations (COOP), and other emergency preparedness topics, i.e., shelter in place, triage, onsite responder, etc. for Federal agencies.

Response Coordination

-FEBs will assess local emergency situations in cooperation with Federal, State and Local officials.

-FEBs will activate established notification system for transmission of local emergency information, as prescribed by the FEB's protocol (Communications Plan).

-FEBs will provide problem resolution assistance as appropriate, to include identifying Federal resources which may be available to assist the community in responding to, or recovering from, an emergency.

-FEBs relay local emergency situation information, by way of periodic reports to the appropriate authorities, to include, but not limited to: OPM/DC, FEB members, media, State and Local government authorities.

-FEBs will disseminate information received from OPM/DC regarding emergency information at the national level – decision on employee work status, information from other departments/agencies, etc.

Communications Plan

-FEBs alert those responsible for implementing the Occupant and Agency Emergency Plans and serve as a redundant (back-up) communication vehicle to ensure notification.

Source: OPM.

Appendix III: FEBs' Host Agencies

FEB	Host agency
Atlanta	Social Security Administration-Regional Office
Baltimore	Department of Defense-U.S. Army/Fort Meade
Boston	Environmental Protection Agency-Regional Office
Buffalo	Department of Homeland Security-Immigration and Customs Enforcement U.S. Coast Guard
Chicago	General Services Administration-Regional Office
Cincinnati	Department of Veterans Affairs-Regional Medical Center
Cleveland	National Aeronautics and Space Administration-Glenn Research Center
Dallas-Fort Worth	Health and Human Services-Regional Office
Denver	Department of Defense-Defense Finance and Accounting Service
Detroit	Department of Defense-U.S. Tank Automotive Command
Honolulu-Pacific	Department of Defense-Pearl Harbor Naval Shipyard
Houston	Department of Homeland Security-Customs and Border Protection
Kansas City	Department of Transportation Federal Highway Administration/Federal Aviation Administration
Los Angeles	Department of Homeland Security-Customs and Border Protection/Los Angeles Field Office
Minnesota	Department of the Interior-Headquarters National Business Center
New Mexico	Department of the Interior-Bureau of Land Management
New Orleans	Department of Agriculture-National Finance Center
New York City	Department of Transportation-Federal Aviation Administration
Newark	Department of Homeland Security-Customs and Border Protection
Oklahoma	Department of Defense-Tinker Air Force Base
Oregon	Department of Veterans Affairs-Portland Veterans Affairs Medical Center
Philadelphia	Department of Defense-Defense Logistics Agency
Pittsburgh	Office of Personnel Management
San Antonio	Department of Veterans Affairs-Regional Medical Center
San Francisco	Department of Labor-Office of Assistant Secretary for Administration and Management
Seattle	Department of Housing and Urban Development-Regional Office Social Security Administration-Regional Office of Personnel Management
South Florida	Department of Commerce-Headquarters
St. Louis	Department of Defense-National Geospatial-Intelligence Agency

Source: OPM.

Appendix IV: Comments from the Office of Personnel Management

UNITED STATES OFFICE OF PERSONNEL MANAGEMENT
Washington, DC 20415

The Director

APR 12 2007

The Honorable David Walker
Comptroller General
U.S. Government Accountability Office
441 G Street, NW
Washington, DC 20548

Dear Mr. Walker:

Thank you for the opportunity to provide comments in response to the Government Accountability Office (GAO) draft report entitled *The Federal Workforce: Additional Steps Needed to Take Advantage of Federal Executive Boards' Ability to Contribute to Emergency Operations* (GAO-07-515).

I appreciate GAO's recognition of the Federal Executive Boards' (FEB) contributions to the Federal Government's effectiveness in the field. The report's focus on FEBs' work in emergency preparedness is particularly useful for understanding the critical role FEBs play in Federal planning for natural and man-made disasters. While the Report's design did not include the broader scope of FEBs' work, the Boards' combined focus on human capital management, emergency preparedness and community relations make them an effective part of Federal emergency planning efforts.

The Office of Personnel Management (OPM) understands the importance of the issues raised in the GAO Report. Because they reflect areas of concern to us as well, OPM has addressed these issues in the past, and continues to do so today. For example, to address FEB funding issues, OPM successfully obtained Congressional approval for cross-agency funding authority by FEB member agencies. Currently, we are building the network's capacity to deliver by developing a National FEB Strategic and Operational Plan. This Plan – currently in draft – identifies core activities under two lines of business: Emergency Preparedness, Security & Employee Safety and Human Capital Readiness. Each line of business defines measurable outcomes and deliverables to assure consistent delivery of services across the FEB network. By documenting results and creating a consistent accountability mechanism, OPM is building a strong business case through which we can address the resources FEBs need to continue operations.

Through this process, we are continuing to build collaboration mechanisms with our strategic partners such as the Federal Emergency Management Agency (FEMA). As the GAO report points out, the FEBs' emergency support activities are critical for FEMA's ability to accomplish its mission. We believe that institutionalized relationships with

www.opm.gov Our mission is to ensure the Federal Government has an effective civilian workforce www.usajobs.gov

strategic partners like FEMA can demonstrate FEBs' business value and help address ongoing funding issues.

I am providing specific technical corrections to the draft report and would ask for your consideration of these changes.

Sincerely,

Linda M. Springer
Director

Appendix V: GAO Contact and Staff Acknowledgments

GAO Contact

Bernice Steinhardt (202) 512-6808 or steinhardtb@gao.gov

Acknowledgments

In addition to the contact named above, key contributors to this report were William Doherty, Assistant Director; Dominic Barranca; Scott Behen; Kathleen Boggs; Deirdre Brown; Beverly Burke; Jimmy Champion; Betty Clark; Derrick Collins; Daniel Concepcion; Amber Edwards; Richard Guthrie; Bonnie Hall; Charles Hodge; Aaron Kaminsky; Judith Kordahl; Susan Mak; Signora May; Samuel Scrutchins; Gabriele Tonsil; George Warnock; and Daniel Zeno. In addition, William Bates, Thomas Beall, David Dornisch, and Donna Miller provided key assistance.