PROTECTING THE HOMELAND: FIGHTING PANDEMIC FLU FROM THE FRONT LINES

JOINT HEARING

BEFORE THE

SUBCOMMITTEE ON PREVENTION OF NUCLEAR AND BIOLOGICAL ATTACK

JOINT WITH THE

SUBCOMMITTEE ON EMERGENCY PREPAREDNESS, SCIENCE, AND TECHNOLOGY

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PROTECTING THE HOMELAND: FIGHTING PANDEMIC FLU FROM THE FRONT LINES

Wednesday, February 8, 2006

U.S. HOUSE OF REPRESENTATIVES,
COMMITTEE ON HOMELAND SECURITY,
SUBCOMMITTEE ON PREVENTION OF NUCLEAR
AND BIOLOGICAL ATTACK,
JOINT WITH THE
SUBCOMMITTEE ON EMERGENCY PREPAREDNESS,
SCIENCE, AND TECHNOLOGY,
Washington, DC.

The subcommittees met, pursuant to call, at 2:11 p.m., in Room 2237, Rayburn House Office Building, Hon. John Linder [chairman of the Subcommittee on Prevention of Nuclear and Biological Attack] presiding.

Present: Representatives Linder, Reichert, Rogers, Dent, Langevin, Pascrell, Thompson, Markey, Lowey, Norton, Christensen, and Etheridge.

Mr. LINDER. [Presiding.] The Committee on Homeland Security's Subcommittee on Prevention of Nuclear and Biological Attack and the Subcommittee on Emergency Preparedness, Science and Technology will come to order.

The subcommittees are meeting today to hear testimony on protecting the homeland in fighting pandemic flu on the frontlines. I would like to welcome and thank our distinguished panel of witnesses for appearing today before this joint hearing of these two subcommittees.

Imagine this scenario. On September 29, seven deaths were reported in Washington. By October 2, there had been a total of 35. By the middle of October, 60 to 90 people were dying each day.

By then, the city's commissioners had taken drastic steps, first closing the schools, then prohibiting any large indoor public gatherings, including church services. The Red Cross nurses were caring for the sick, who were flooding area hospitals, or worse, suffering unattended in their homes. Disposal of bodies became a particular problem. On October 12, the U.S. Capitol shut its door to visitors.

Ladies and gentlemen, this is an account of life in the fall of 1918 here in Washington, D.C., reported in The Washington Post. The United States, like most of the rest of the world, was gripped with a pandemic of Spanish influenza. With over 50 million deaths worldwide, it was the third-largest epidemic in recorded history, and the largest since the Middle Ages.

Today, the possibility exists that the world may face yet another deadly outbreak, this time from an avian influenza strain known as H5N1. While the virus has not yet evolved into a form easily transmissible between humans, should it acquire that capability, it is similar to the 1918 pandemic. Estimates show that between 30 million and 384 million people worldwide would be afflicted.

To combat this potentially devastating scenario, President Bush announced on November 1 of last year a national strategy for pandemic influenza, which provides a framework for U.S. government planning efforts.

The goals of the national strategy are: first, to stop, slow or otherwise limit the spread of a pandemic to the United States; second, to limit the domestic spread of a pandemic and mitigate disease, suffering and death; and third, to sustain infrastructure and mitigate the impact of a pandemic to the economy and society.

I look forward to working with the executive branch to implement this initiative in the coming months.

The national strategy recognizes, however, that preparing, implementing and responding to a pandemic cannot be viewed as a purely federal responsibility. Our nation must have a system in place at all levels of government and all sectors of society to address the pandemic threat.

Medical countermeasures such as vaccines and antiviral drugs are vital. At present, the strategic national stockpile only has approximately 3 million bulk courses of an unfinished H5N1 vaccine. The vaccine has not even yet been filled in vials. Antivirals like Tamiflu are limited as well. There are only enough doses on hand to cover about 1 percent of the U.S. population.

Furthermore, effectiveness of the H5N1 vaccine and antiviral drugs in preventing and mitigating the effects of the strain of the influenza that sparks a pandemic are unknown. In the absence of an effective vaccine or antiviral, nonmedical countermeasures and intervention strategies are critical.

Surveillance and early warning systems are essential tools for the non-medical-based pandemic strategy that will afford us more time to intervene and implement control measures to mitigate the virus' spread.

Strengthening our public health infrastructure will increase our ability to identify, diagnose and treat those needing care, deliver information quickly to those local, state and national health officials and physicians to be of most help, as well as improve our overall surge capacity.

Extending efforts to most of these areas will certainly not be a waste. It will instead provide benefits beyond preventing and preparing for and responding to an influenza pandemic. Clearly, if we are successful in implementing these strategies, our nation will be better equipped to face the threat of biological terrorism.

I am now pleased to yield for an opening statement to my friend from Rhode Island, Mr. Langevin.

Mr. LANGEVIN. Thank you, Mr. Chairman.

I would like to welcome our witnesses here today.

This hearing is on a very important topic. Influenza pandemic is looming, and we need to know how prepared we are.

Just a few months ago, Hurricanes Katrina and Rita struck the Gulf Coast. Response on nearly every level was disgraceful. In the case of these hurricanes, we had several days of warning. We should have been better prepared and ready to respond.

In the case of a potential avian flu outbreak, we have already had at least 1 year of warning and we probably have at least another year to get ready. There really is no excuse for failing to be prepared.

The Spanish flu epidemic of 1918 to 1920 is believed by the CDC and other health experts to be a similar model of what we can expect in an H5N1 outbreak. The Spanish flu killed approximately 675,000 Americans and more than 20 million people around the world.

Based on such a model, an epidemic of H5N1 avian influenza could cause nearly 2 million deaths in the U.S. and up to 300 million deaths worldwide. That epidemic was nearly 90 years ago. Our knowledge of viruses has increased dramatically and we have many more tools at our disposal.

Last month, Secretary Leavitt was in Rhode Island to promote the administration's response plan. While I appreciate the fact that he is reaching out to states early, the message from the meeting was that states need to fight the pandemic on their own, with minimal federal assistance. Well, the flu does not abide by state lines. We need a well-coordinated national response if we are to be successful in slowing the spread of disease and saving the lives of Americans.

Our goals must be realistic. We will not be able to keep avian flu from our shores if it is to mutate into easy human-to-human transmission. Unfortunately, people will get sick and many could die. We must control the spread of the disease enough to ensure that our health care system is not overwhelmed and that our economy is not crippled.

I am concerned that the president's national strategy on pandemic influenza could fail us because it puts too much emphasis on vaccines and antivirals. The national strategy, which was released in November, proposes $7.1 billion to prepare for avian flu, 85 percent of which is focused on vaccines and antivirals that the U.S. does not currently have the capacity to produce.

At the same time, the national strategy provides only $251 million to detect and contain outbreaks and $644 million to ensure that all levels of government are prepared to respond to a pandemic outbreak. Even if cell-based vaccine production technology were available today, the time from virus isolation to vaccine production would be approximately 6 months. During that time, no vaccine would be available. Using the present technology, it would take between 14 to 18 months to manufacture a vaccine.

An antiviral such as a Tamiflu will present a slightly more optimistic story because they can be produced today. However, the production process is difficult and takes approximately 6 to 8 months. Moreover, Tamiflu only treats the symptoms of the flu, rather than preventing the spread of the virus, and it must be taken within a few days of initial infection in order to have any effect at all.

I am interested to hear from our witnesses today if they feel the president's plan is a good one, or if they agree that it relies too

much upon drugs and not enough on simple public health practices such as hand washing and limiting social contact. We know that these methods, if practiced correctly, can be effective.

I know that people such as our witnesses are trying their best to prepare for a pandemic. One thing that would be important is consistent and steady leadership, though, from the federal government.

I am concerned that the national response plan might not be executed properly because the White House and the Department of Health and Human Services have created separate plans and people do not know which plan to follow. So I am interested to hear to whom you are looking to for guidance, and what kind of leadership and cooperation you are receiving from the Department of Homeland Security, as well as the Department of Health and Human Services.

Ladies and gentlemen, right now, we have time to do what is right, and to do this right overall in terms of response and our planning. I am pleased to see that we are taking oversight responsibility seriously by ensuring that we are prepared.

Mr. Chairman, I want to commend you for convening this hearing today.

Thank you very much, Mr. Chairman. I yield back my time.

Mr. LINDER. I thank the gentleman.

The Chair now recognizes the chairman of the Subcommittee on Emergency Preparedness, Science and Technology, the gentleman from Washington, Mr. Reichert, for the purpose of making an opening statement.

Mr. REICHERT. Thank you, Mr. Chairman.

Welcome. Thank you for taking time out of your schedules to be with us this afternoon. I am looking forward to hearing from you. We appreciate your appearance before us today at this joint hearing on our nation's preparedness to deal with a potential avian flu pandemic.

Before we start, I would like to commend my colleagues, Chairman John Linder and Ranking Member Jim Langevin on the Subcommittee on Prevention of Nuclear and Biological Attack, for their hard work on this complex and pressing issue. I appreciate your willingness to hold this joint hearing with the Subcommittee on Emergency Preparedness, Science and Technology, which I chair with the able assistance of my good friend Mr. Pascrell.

As a former sheriff from the Seattle area, I approach this issue from the perspective of a first responder. Avian flu may never strike the United States, but if it does, this country must be prepared. Pandemics affect every sector of our society, not just our nation's health care system. It has the potential to severely disrupt our way of life, cause devastating loss of life, and have staggering effects on the international economy.

As usual, we will rely heavily on the nation's law enforcement, firefighters, emergency medical services and other health service workers to serve on the frontlines at grave risk. These dedicated, caring men and women will not only be required to care for the sick. They will also be required to ensure the continuation of essential services, maintain public order, distribute drugs and medical supplies, food, water and enforce quarantines and isolations.

Given the unique nature of a pandemic, the federal government will not be able to respond to every hot spot. Unlike a natural disaster, even one as catastrophic as Hurricane Katrina, a pandemic knows no geographical or temporal bounds. It can spread around the globe in the course of months or years, usually in waves, and affect communities of all sizes and compositions.

That is precisely why our nation needs to ensure that every level of government is adequately prepared. It is my hope that this hearing will give the subcommittees a better sense of state and local government and private sector pandemic flu preparedness and how the federal government can support such efforts.

I want to thank again the witnesses for their testimony today, and our colleagues on the Prevention Subcommittee for holding this joint hearing with us. Thanks.

Mr. LINDER. I thank the gentleman.

The Chair now recognizes the ranking minority member of the Subcommittee on Emergency Preparedness, Science and Technology, the gentleman from New Jersey, Mr. Pascrell, for the purpose of making an opening statement.

Mr. PASCRELL. Thank you, Mr. Chairman.

I want to preface my remarks, my opening statement with some questions I would ask the panel, and thank you for your service to your country.

I want to preface the following questions. We know that the national response plan declares that the Department of Homeland Security is the lead agency, and that the Secretary of Homeland Security is the principal federal officer if an incident of national significance is declared. Do you have clear lines of communication with the department so that you will know what the Secretary is advising in such a case?

My next question—and you are going to have your testimony, but I would like you to keep this in mind when you are presenting it. From all we have seen so far, the administration's national strategy for pandemic influenza is highly tilted towards pharmacological countermeasures, vaccines and antivirals, and 85 percent of the funding requested in support of the plan goes to these measures. Do you agree with that approach?

And finally, what do you feel is the proper role for the federal government in providing resources for pandemic preparedness and response? What are your expectations from us?

I want to thank Chairman Linder and Chairman Reichert for holding the hearing. The threat of a global influenza pandemic is real. It is not exaggerated. There is no hyperbole that I have seen. The possible effects of an actual outbreak could be catastrophic.

Another very real fear exists, the fear that we still remain completely unprepared. Hurricane Katrina exposed our complete lack of coordination and preparedness to address a catastrophic storm, even when we had several days notice. The pandemic flu scenario is affording us much more time to prepare, but as of today it appears that the nation is poised to repeat a grave error by not heeding the lessons learned from Katrina.

For example, while the president released his national strategy for pandemic influenza in November 2005, the plan contains no operational details; makes very broad mention of vaccines and

antivirals, foreign and domestic monitoring, and response and mitigation. Agency-specific additions to this plan were to be completed by each federal agency by February 1, 2006.

Mr. Chairman, those plans are not available yet. This is an inauspicious start, to say the least.

Allegedly, the overriding plan could be followed in the case of a declared incident of national significance, including certain biological events like a pandemic flu, is the national response plan. But the level of knowledge and familiarity of the different entities responsible for pandemic influenza response within the national response plan varies widely. Many state and local entities have simply never read the document, even though they are expected to develop plans that complement the document.

Interestingly, 8 days ago, the GAO, the Government Accountability Office, released its preliminary observations regarding preparedness and response to Katrina and Rita, and found that the Department of Homeland Security failed to implement the NRP or designate a key federal point of contact. This is a real problem. I am not convinced that there is appropriate leadership in place to address the issue. Its current state is simply unacceptable for everybody on this side of the table.

We know the dangers are enormous. Don't take my word for it. On October 27, 2005, Health and Human Services Secretary Michael Leavitt said the following: "If the pandemic hits our shores, it will affect almost every sector of our society, not just health care, but transportation systems, workplaces, schools, public safety and more. It will require a coordinated government-wide response, including federal, state and local governments and it will require the private sector and all of us as individuals to be ready."

We are not ready, but we can do better as a nation. I am thankful that the two subcommittees within the Homeland Security Committee are taking on this issue. We need to examine and explore the ways best to consolidate and coordinate the actions of the federal, state and local actors. We need to ensure that a lack of federal leadership is remedied, and examine how best to combat problems of strained resources.

We have a good panel before us, and I welcome them. I am very interested in hearing from our witnesses about their dealings with DHS, as well as their preparation, coordination, and incident command plans to address what many describe as an event certain to happen.

I thank the chairman.

Mr. LINDER. I thank the gentleman.

The Chair now recognizes the ranking member of the full committee, the gentleman from Mississippi, Mr. Thompson, for the purpose of making an opening statement.

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

I would like to welcome our witnesses here today, and I look forward to their testimony.

I am pleased that these two subcommittees are turning their attention to the issue of pandemic flu preparedness and response. I am also looking forward to the hearing in the full committee on this subject, which as I understand at this point will feature Secretary Chertoff and Secretary Leavitt as witnesses.

In a full-scale pandemic situation, federal, state, local and private entities will all need to cooperate effectively for a response to be successful. The thousands of state and local health departments are working hard to plan for pandemic flu, but they have been hampered by a lack of money and guidance from the federal government.

In the president's national strategy for pandemic influenza, the bulk of federal research funding is going for drug research and vaccines. The president requested only $100 million for state and local preparedness. While Congress appropriated $350 million in the emergency appropriation this past December, it still pales in comparison to the $6 billion that the president requested for vaccines and antivirals.

I am also concerned that the various flu response plans that are being developed by federal agencies do not complement the national response plan, which is supposed to guide the way we manage domestic emergencies. We have many questions to answer. Who is in charge of response operations at the federal, state and local levels? Who gets vaccines first? Where should we urge citizens to wear masks or stay home? When should we close schools? How will hospitals handle the surges of patients?

As I have spoken in recent months to local physicians, hospital administrators, public health officials and first responders, it has become clear to me that we do not yet have the answers to these questions. I hope this hearing will help us begin to answer them. Although we cannot be certain, many experts predict we have a year or longer before a full-scale outbreak of avian flu may occur. In that time, we must ensure that a coherent nationwide response is ready, and that is and will be properly executed when we need it.

Thank you, Mr. Chairman.

Mr. LINDER. I thank the gentleman.

We are pleased to have before us a distinguished panel of witnesses on this important topic.

Let me remind the witnesses that their entire written statement will be made part of the record. We would ask you to keep as best you can your testimony to no more than 5 minutes.

Dr. Tara O'Toole is the chief executive officer and director of the Center for Biosecurity at the University of Pittsburgh Medical Center. She has served on numerous government advisory committees, including panels of the Defense Science Board, the National Academy of Engineering's Committee on Combating Terrorism, and the National Academy of Science's Working Group on Biological Weapons.

Secretary David Mitchell is the secretary of the Department of Safety and Homeland Security in the state of Delaware. Secretary Mitchell has over 3 decades of law enforcement experience. Prior to his recent appointment, he was superintendent of the Maryland State Police.

Ms. Frances Phillips is a health officer in Anne Arundel County, Maryland. In addition, she is the vice chair of the Bioterrorism and Emergency Preparedness Committee of the National Association of County and City Health Officials, and past president of the Maryland Association of County Health Officers.

Mr. Ernest Blackwelder is the senior vice president of the Business Executives for National Security, or BENS. Mr. Blackwelder oversees the organization's Business Force activities, including operations in New Jersey, Georgia, Missouri, Kansas, Iowa, Nebraska and California. Prior to joining BENS, Mr. Blackwelder was chief operating officer of ArsDigita, an Internet software and professional services firm.

Dr. David Seaberg is with the Department of Emergency Medicine at the University of Florida. He serves as the president of the Florida College of Emergency Physicians. He also serves on the board of directors for the American College of Emergency Physicians and the Emergency Medicine Learning and Resource Center.

We thank you all for being here.

Dr. O'Toole?

STATEMENT OF DR. TARA O'TOOLE

Dr. O'TOOLE. Thank you, Mr. Chairman. It is a pleasure to be with you today.

I am going to address three specific issues amongst the panoply of very serious and scary matters you outlined in your opening remarks. I am going to talk about the health care, specifically hospitals' response to a possible pandemic and what that would mean, and what it is going to take to get through it without collapsing our health system and endangering the faith of the American people, not to mention their lives.

I am then going to talk a little bit about disease containment, and the prospects for protecting the well, for stopping the spread of disease in a flu pandemic; and finally the very important topic of engaging the people as collaborators in our response to flu.

Before I do that, I am going to say a few words about the current situation. We have no idea on a scientific basis when or if a pandemic might break out. We do not know why 1918 happened. We do not understand the genetics of that virus, which we have now replicated. We do not understand why it was so virulent or why it spread or why it literally popped up out of nowhere. So we cannot predict when or if the avian flu that is now endemic through Eurasia will become transmissible.

But it is very important to understand that the current situation is historically unprecedented. There are now millions and millions of wild birds throughout Southeast Asia and Asia, and today we learn that there are poultry outbreaks of H5N1 in Nigeria, who are carrying this very lethal virus as they migrate around the world. The more birds that carry the virus, the greater the chances that this virus would become transmissible. It might happen a year from now. It might happen tomorrow. There is absolutely no way of predicting.

Hopefully, we will be given the gift of time to get prepared, but whenever it happens, getting through this is going to be a traumatic event for America and an existential event for some countries and certainly for some economies. We are only going to get through this intact if everybody works together. That is all sectors, not just public, but also private at all levels.

How do we do that? Let's talk about hospitals, because they are the linchpin of the U.S. health care system in many ways, and they

are where Americans expect to go if they or their family are very sick. It is true that there are a lot of things to worry about beyond hospitals and health care, but the irony of the situation is that hospitals and health care, because they are a private sector enterprise, have been left out of most emergency preparedness, bioterrorism preparedness, or flu preparedness exercises in thinking.

That is hard to believe, but that is the case. Most hospital administrators have not read the flu plan, and they are not going to. In most hospitals, the person in charge of disaster preparedness is a low-level assistant professor who has this as an add-on assignment. Hospitals are already very overburdened. They have responded to the financial pressures of the last decades by cutting staff, by going to just-in-time supply chains, et cetera, et cetera.

The first thing to know, and this is not going to change, in all likelihood, is that if a 1918-type pandemic broke out in America, most Americans would have no access to the health care system. I am not just talking about hospital admissions. I am talking about the ability to talk to or to visit a physician. We have to educate the American people to this reality, and we have to organize ourselves so that the health care system we have can be as expandable and as agile as possible. That is going to take a lot of work.

Let me give you some specifics. CDC has put out a computer model that allows each hospital to calculate how much it would have to surge in a 1918 pandemic or in a smaller 1968-type pandemic. Let me give you the figures for the Atlanta metro region if we had a 1918-type flu. All of the hospitals together in Atlanta would have to increase their current pre-epidemic hospital bed capacity by 300 percent just to care for flu patients. Now, beds are not the problem. The real problem is the staff to take care of the patients in the beds. This 300 percent does not include the people that you would need to take care of heart attacks and patients not related to flu. Atlanta would have to increase its intensive care unit capacity by 700 percent. It would need nearly four times as many ventilators as it is using today just to care for flu patients.

This is not feasible. You cannot get there from a kind of marginal, incremental increase over what we have done. Hospitals can probably get prepared to surge maybe 20 percent over their current capacity. But what we are talking about here is a fundamental shift in how we deliver health care and what we mean by health care.

Within your purview, within the purview of the Department of Homeland Security, lies the National Disaster Medical System and the DMAT, the Disaster Medical Assistance Teams. These are going to be of very little use in a pandemic. There is a terrific report out that was commissioned by Secretary Ridge that critiques the NDMS and the DMAT quite carefully and accurately, that is worth your while, done by a Dr. Lowell. The essence of it is that we have a very fragmented federal response system when it comes to health care. We have to get that much more coherently organized.

We definitely need to plan, but I would suggest that there is no way we are going to be able to come up with explicit protocols and procedures for how we would react to a pandemic. We are not going to know when we are going to close schools in advance. We are not

going to know who is going to get the ventilators. What we have to do, and what the main point of planning is, as we have learned in all of the emergency preparedness done so far, is that we have to start talking with each other.

In an emergency, the NDMS, which is intended to transport patients from the disaster area to another region that has available hospital beds, is not going to make sense. We are not going to be transporting contagious people around the country, besides which everyone is going to be overloaded or fearful of being overloaded and unlikely to be willing to accept new patients.

Now, flu is very, very contagious. We are not going to be able to stop the spread of a transmissible flu if it breaks out. This notion that if we see it early, if we catch the first 30 people who are spreading it from person to person, and then fly lots of Tamiflu in and give it to the one village that was first the victim of this transmissible gene, is worth pursuing because we ought to do anything we can to quench this pandemic, but has a very low probability of success. We are probably not going to see this breakout if it happens in Kurdish Iraq or in the Urals somewhere until it is well under way, and then it will be everywhere.

There are some important things to know about flu. Every disease spreads slightly differently and the public health measures you use to control the spread of disease differ from one pathogen to the next. You can be contagious with flu before your symptoms. In fact, you usually are. In fact, in a normal flu season, half of the people who are infected are never symptomatic, but can spread the disease. So it is going to be almost impossible to actually contain the disease or to stop the spread.

What we want to do is slow it down so the consequences are spread out over time and we have a better chance of responding. We need the cooperation of the American people in succeeding with this. They have to understand that if they get sick, they need to stay home. Provisions have to be made to make that possible, which means a whole bunch of things, from the capacity for employees to work from home, to delivering food to the doorstep, to keeping good movies on television so you can keep the teenagers from going to the mall. A lot of the action is going to happen at a very local level.

We have to keep as many people as possible out of the hospitals so the hospitals can tend to the very ill. At some point, the hospitals will become overrun and we are going to have to shift to this complete paradigm change in health care. That ought to be a decision that is made by leaders of the community, not just elected officials. New organizations are going to have to be formed that will make it possible for very competitive hospitals who on a normal day would try and steal each other's patients, to work together and make joint decisions that are going to mean life and death for their communities.

It is quite possible that interventions intended to prevent the spread of disease will make things worse. It is quite possible that we could worsen the CBO's estimates of a 5 percent drop in GDP if we were to have a 1918 pandemic, by trying to stop travel; by trying to limit the flow of goods; by basically doing things that

mess around with the economy, but are not going to get you much in terms of stopping the spread of disease.

So all elected officials have to be very informed about how flu spreads and what works and what does not work with respect to public health interventions.

Mr. LINDER. Doctor, if you go on too long, I will have to stop you, before my glee at what you are speaking about just overwhelms me. We will be back with questions for you.

Dr. O'TOOLE. Could I say one thing?

Mr. LINDER. Sure.

Dr. O'TOOLE. We can do this. We have absolutely extraordinary scientific and technological prowess that we are not using well. We have a huge coast-to-coast health care system that we can organize, and we have a private sector that I think is willing to pitch in, but we need a better vision of how we get through it.

[The statement of Dr. O'Toole follows:]

PREPAED STATEMENT OF TARA O'TOOLE, MD, MPH

Mr. Chairman, distinguished members of the committee, thank you for the opportunity to appear before you today to discuss the nation's preparedness to deal with a possible influenza pandemic.

My name is Tara O'Toole. I am the Director and CEO of the Center for Biosecurity of the University of Pittsburgh Medical Center and a professor of medicine at the University of Pittsburgh Medical School. The Center for Biosecurity is a nonprofit, multidisciplinary organization which includes physicians, public health professionals and biological and social scientists located in Baltimore. The Center is dedicated to understanding the threat of large-scale lethal epidemics due to bioterrorism and to natural causes. My colleagues and I are committed to the development of policies and practices that would help prevent bioterrorist attacks or destabilizing natural epidemics, and, should prevention fail, to mitigating the destructive consequences of such events.

Last year, my colleagues and I had the privilege of participating in this committee's retreat at Wye River, where we held an interactive table-top based on Atlantic Storm, a ministerial exercise conducted in January 2005 which was designed to illuminate the kinds of issues that world leaders would confront in the wake of a bioterrorist attack using smallpox.

Over the past 18 months, the Center for Biosecurity has focused its attention on the threat of pandemic influenza and the capabilities needed to respond to such an event. I will focus my testimony on two aspects of pandemic response: containing the spread of influenza and the role of hospitals in pandemic preparedness and response. First, however, I will describe the current situation with respect to H5N1 and the potential impacts on hospitals were a flu pandemic to occur in the next year or two.

Background: The Likelihood and Implications of Pandemic Influenza

Current Situation—

The current situation in Asia and parts of Europe—namely, the infection of millions of wild, migratory birds and poultry with the H5N1 strain of influenza, and the infection of over 100 people—is unprecedented. H5N1 is an especially virulent type of flu against which no humans have immunity. More than half of all humans known to be infected have died. H5N1 is clearly endemic in wild birds, and cannot now be eradicated. Moreover, as the birds migrate to winter feeding grounds, they are spreading the virus into wild and domestic birds across Asia and into Europe. The World Health Organization (WHO) warned in 2005 that the evidence point towards the likelihood of an influenza pandemic, which could sicken one of four people on the planet, and kill millions.

Recently, bird flu has been found in domestic poultry in Turkey and in Kurdish Iraq. Peregrine falcons in Saudi Arabia have also been infected. Infection with avian flu continues in domestic flocks across wide expanses of Indonesia, and southeast Asia. At least XXXX human cases of bird flu have been confirmed, although no human-to-human transmission has been observed.

Potential Impacts—

The WHO estimates that once the next human pandemic begins, it will be found on all continents (but not necessarily in every country) within three months and will spread across the world within 12 months. Recurrent outbreaks would be expected over subsequent winter and spring seasons. The specific pattern of spread is impossible to predict and will depend on the properties of the pandemic strain (how lethal, how contagious, how closely it could move around the planet).

The Congressional Budget Office (CBO) has estimated that in a 1918 scale pandemic, about 90 million people would become sick and 2 million would die in the US alone [Congressional Budget Office, "A Potential Influenza Pandemic: Possible Macroeconomic Effects and Policy Issues", Dec. 8, 2005]. The CBO estimates that a pandemic of this scale would lower real GDP by about 5%compared to the level it would have reached had there not been a pandemic. The CBO notes that "Improving the capacity of the health care system to care for many people in all parts of the country who are sick at the same time stands out as a priority. . . ." [CBO, page 2].

There is no scientific way to predict whether an influenza pandemic will occur this year or next or several years from now or how severe it will be. That there will be an influenza pandemic in this century is certain; flu pandemics have occurred throughout history, about three times each century. The "good news" is that there is much that can be done to mitigate the death, suffering and economic and social disruption caused by epidemics—*if preparations are made in advance.* Of course the preparations that could be put in place were a pandemic to occur in the next few months would differ considerably in scale and scope from what could be accomplished if we had 18 months or years to get ready. My colleagues and I are deeply concerned that the current pace and intensity of pandemic preparedness activities, including the search for effective vaccines, are still very inadequate given the possible consequences of this threat.

Importance of Vaccine—

Having adequate amounts of an effective vaccine changes everything. Global supplies of a pandemic vaccine and the ability to distribute it could transform these grim scenarios decisively. Today, there are more than 20 projects to develop a vaccine against H5 type influenza viruses underway, pursued by private sector biopharma companies and the NIH but results to date have been disappointing. The recent Congressional appropriation for flu vaccine research and development is welcome and necessary, but still falls far short of what is warranted by the nature of this threat. The scientific basis of the effort is sound, but there is, as yet, no national strategy to pool America's prodigious scientific and pharmaceutical industry capacity in the context of an overall strategic plan. I realize this issue is beyond the usual scope of this committee, but the matter is of such overriding importance that all of Congress should be aware of the situation.

Caring for the Sick During a Flu Pandemic or Mass Casualty Bioattack

US Health Sector is Unprepared to Meet Surging Pandemic Health Care Needs

In the event of a 1918-scale flu pandemic, most Americans would be unable to access the health care sector because demand will exceed supply by large factors that cannot be bridged by incremental, marginal increases in health care capacity.

Hospitals would be flooded with desperately ill people seeking care. Most hospitals routinely operate at or near full capacity, however and have limited ability to rapidly increase services. During an epidemic, the health care workforce would be greatly reduced. Health care workers would face a high risk of infection because of contact with infected patients; many would need to stay home to care for sick relatives, and in the absence of vaccine, others might fear coming to work lest they bring a lethal infection home to their families *The provision of critical, non-flu medical services would be adversely impacted in most communities.* .

In addition, because hospitals have adopted just-in-time supply chains, there would be an almost immediate shortage of critical supplies such as ventilators, masks and gowns, antibiotics, etc. The shortages of supplies and staff would likely worsen over time as critical components of supply chains are lost due to attrition and absenteeism in the US and overseas. (During the 2003 SARS outbreak, a single Ontario teaching hospital used 18,000 N95 masks per day).

All three TOPOFF exercises convincingly demonstrated that hospitals are among the most fragile components of mass casualty response. Hospitals have little money of their own to spend on stockpiling supplies or planning for catastrophes. The US health care delivery sector is financially pressured, and highly competitive. One third of US hospitals do not meet operating costs; among non-profit hospitals which

are in the black, operating margins average only 3%. In a pandemic, hospitals would be forced to close clinics, cancel surgery and defer most money making services to care for the volume of flu victims. Many hospitals may be forced to close down due to lack of staff and/or lack of revenue.

Hospitals do not have the funds to pay for pandemic preparedness planning or to purchase stockpiles of equipment or train staff. Federal funds for hospital preparedness began only in FY 2002 and have remained at low levels. The federal appropriation for FY 2006 was only enough to cover the salary of a single nurse at each of the country's approximately 5000 hospitals for one year.

Within the medical community, there are widespread expectations that the military would quickly provide significant resources (personnel, mobile hospitals, equipment) during a mass casualty event. The military maintains that its medical resources are limited and that force support needs would be the priority.

CDC Flu Surge Projections: Pandemic Demands Would Overwhelm Most Hospitals

It is important to have a clear picture of what the pressures of pandemic flu would mean. CDC has create "Flu Surge", a software program that allows one to project the patient demands that would be levied on hospitals of different types and sizes if the pandemic attack rates and severity of illness mimicked those of 1918.

For example, in a 1918 type pandemic, in the Atlanta metro area, that region would require 300% of its current (pre-epidemic) hospital bed capacity to care for flu patients (and the necessary clinical staff to care for this increase in patients); 700% of Atlanta's pre-epidemic Intensive Care Unit capacity and nearly four times as many ventilators to care just for the flu patients.

These demands do not take into account the resources that would be required to meet normal ongoing critical medical needs (care of heart attack victims, etc.).

The US lacks a national strategy for providing health care surge capacity in mass casualty emergencies.

The NDMS, DMAT teams and uniformed public health service would be of little practical use in such an emergency. These organizations lack the necessary operational scale and skill sets and will be needed in their home communities.

In a large-scale flu pandemic or bioterror attack, the National Disaster Medical System (NDMS) and the Disaster Medical Response Teams (DMATs) would be of little practical use. An analytic report of the Department of Homeland Security's readiness to respond to national medical emergencies (January 2005) stated:

> "A National healthcare system-wide strategy for providing surge capacity does not exist. . .Numerous Federal programs (e.g. NDMS, Commissioned Corp Readiness Force, and the Medical Reserve Corps program) exist to enhance surge capacity, but they are fragmented and not incorporated into the national response effort."
>
> [Lowell, J. "Medical Readiness Responsibilities and Capabilities: A Strategy for Realigning and Strengthening the Federal Medical Response", Jan. 3, 2005; accessed at *http://wid.ap.org/documents/dhsmedical.pdf,* 2/3/06.]

NDMS was designed to identify empty hospital beds beyond the area affected by an emergency to which casualties could be sent. However, in a pandemic, all areas of the country would be affected more or less simultaneously, or to fear that they will be hit next.

Moreover, the crucial need is not for *hospital beds,* but for *medical staff* to care for the patients in the beds. The central premise of NDMS—that empty hospital beds imply the capacity to care for patients—is outdated. Similarly, the deployment of Disaster Medical Support Teams (DMATs), which consist of volunteers from around the country, would be impractical in contexts in which team members are needed in their home communities.

Following 9/11, the Medical Reserve Corp (MRC) was founded. This component of the Citizen Corps is located within the office of the Surgeon General in HHS. Still considered a pilot program, the MRC currently has 55,000 volunteers in 330 local MRC units who are intended to supplement local medical resources in times of need. MRCs have no uniform structure and volunteers are not necessarily medical professionals.

The US health care sector is highly fragmented, competitive and largely private. In most locales, there is no "Organizing Authority" with the capacity to establish a regional pandemic plan that would obligate hospitals to collaborate in a manner designed to optimize health care delivery during a pandemic.

Aside from a handful of cities such as New York, Minneapolis and Seattle, there are no well defined or practiced plans for mobilizing hospitals, HMOs and other sources of patient care during a mass casualty emergency. Public health agencies

typically have not taken on this task, nor do most public health agencies have the personnel, funds or legal power to direct, manage or coordinate hospitals in crisis.

The ability to identify and contact health care professionals and support staff is essential to hospitals' capability to respond to emergencies. There is an urgent need to create regional data bases of health care workers that would allow rapid identification of and contact with professionals with certain credentials and skill sets. Further, provisions to credential clinicians at multiple hospitals in a region (ahead of an emergency), and to ensure that professionals and the institutions in which they work have adequate liability protection are essential. Some states have established Mutual Aid pacts or other provisions with neighboring jurisdictions to address such concerns. Yet few regions have successfully built the data bases needed, or solved all the legal problems to ensure that qualified health care professionals can practice across state and institutional lines in times of emergency.

Collaboration among hospitals and other patient care institutions will require near-real time "situational awareness". Yet most hospitals do not have electronic connections with other hospitals in their region or links to their local or state public health agencies. This will make it difficult for decision-makers to understand which hospitals are able to receive patients, where vital equipment is located or needed, what supplies are running low or where the public should be told to take those who are desperately ill.

The Federal government has failed to propose a coherent strategy for pandemic hospital response; has failed to adequately fund even minimal hospital preparedness activities. Responsibility and accountability for hospital preparedness within DHS and HHS are diffuse, confused and grossly under funded and understaffed.

The HHS Pandemic Flu Plan contains a lengthy list of items associated with hospital preparedness. However, the FY06 appropriation for pandemic preparedness contains no funds for hospitals. Accordingly, it would not be possible for any hospital to implement everything suggested by the HHS list, partly because of cost and partly because individual hospitals lack the authority to accomplish much of what is recommended.

It is unclear who in the federal government—or indeed which agency—is in charge of medical response in a mass casualty emergency. The HHS missions and skill base more closely match the need than do the assets currently found in DHS. The National Disaster Medical System (NDMS), transferred to DHS upon its creation, had its management personnel reduced from 144 to 57, leaving the NDMS without a staff physician, medical planner or logistician [Lowell, ibid. p. 6].

Containing the Spread of Disease During a Flu Pandemic

Not All Interventions to Prevent Disease Spread are Worth the Costs

Most disease containment interventions are logistically difficult to implement, of imperfect or uncertain effectiveness, and may have significant adverse economic and social consequences. It is important that decision-makers understand the "return on investment" of various interventions.

When considering possible interventions to stop or slow the spread of influenza—or of any contagious disease—it is important to consider both the possible benefits of the intervention as well as the costs. The interventions that are likely to produce a reasonable "return on investment" are likely to differ, depending on the specific disease and the context. It is critical that elected officials understand how flu spreads and carefully consider the trade-offs involved in various disease containment measures. Some public health interventions will cause more harm than good.

Influenza is a highly contagious disease. In normal flu seasons, each infected victim passes the infection to at least two others. What makes flu so contagious however is the speed at which people are infected. One becomes contagious within 24 to 72 hours after being infected. Thus, flu can spread from one person to the next *before symptoms occur.* In normal flu seasons as many as half the cases may never show any symptoms but can still be contagious. Infectious pandemic flu patients can be expected as well.

This means that screening interventions—for example, screening airline passengers for fever or for cough and other symptoms—will not be effective. This was apparent during the SARS outbreak of 2003. Both Canadian and Chinese authorities, in careful studies, concluded that such screening was of no value although requiring a great deal of time, effort and cost.

Possible Interventions to Control the Spread of a Contagious Disease:

Vaccine—having sufficient supplies of an effective pandemic flu vaccine changes everything. An effective vaccine is by far the single most important component of

pandemic preparedness. If available in time and in sufficient quantities vaccine would make a decisive difference.

Therapies which can be used in treatment—Tamiflu is proposed for use although little information is yet available regarding its actual effectiveness. Given within 36 hours after symptoms begin, it would be expected to reduce growth of the virus and perhaps reduce the likelihood of a fatal outcome. However, virus resistance to this drug is expected and supplies of the drug are limited

Therapies which may prevent spread—Tamiflu decreases the amount ("load") of virus in the patient's throat and hence may prevent disease and, as well, diminish the likelihood of transmission. Prevention with this drug, however, would require daily administration of the drug throughout the course of an epidemic. The quantities of drug required and the cost, let alone complications of the drug itself recommend against its general use.

Isolation of sick individuals—This is an essential component of all influenza containment strategies. Especially in health care settings, isolation of infected patients is critically important to limiting disease spread. However, health care workers are at special risk and thus, appropriate isolation of infected patients and use of "barrier controls" (gowns, face masks, gloves) and hand-washing are essential.

It would also be highly desirable to isolate individuals who are sick with flu but not so desperately ill that they need to be hospitalized. It is likely that many people will remain at home, though some communities are making provisions to equip sports arenas and other large spaces with beds to accommodate those who cannot be cared for at home. To the extent possible, patients should be encouraged to stay at home from the first signs of illness and to stay out of close contact with others until they are no longer contagious.

The resources needed to enforce compulsory isolation or quarantine are enormous and the likelihood of failure is high. Cooperative rather than compulsory measures are to be preferred.

There are significant challenges associated with isolation of infected persons, whether they are restricted to their homes or isolated in some central facility. Arrangements must be made to provide people with food and medical services (including medicines for chronic illnesses

Quarantine—Historically, quarantine referred to sequestration of large groups of people who are without symptoms—some of whom may have been infected with a disease, some not—until it was certain that all who might have been infected were past the point of being able to spread the illness. Large scale quarantine requires vast resources, most likely including the use of force. Experience shows that it has seldom proved to be effective and, in some cases, has led to suppression of reports of disease and of persons fleeing or escaping the restricted area. Rarely does it succeed in limiting spread of the disease.

Social Distancing—this involves voluntary avoidance of close contact (3–6 feet) with others. Social distancing could include cancellation of schools or large public gatherings such as sports events or business conventions. It could also include asking employees to work from home, urging people to avoid coming within 3 feet of others, forgoing handshakes and other forms of direct contact.

Use of Personal Protective Equipment—such as masks, respirators, gowns, gloves. These are of value for use of health care personnel in preventing their acquisition of infection. Masks are of uncertain value for public use.

Possible Congressional Actions to Improve US Hospital

Response During a Pandemic or Mass Casualty Situation

• The Secretary of HHS is the nation's leader on pandemic preparedness and Secretary Leavitt's commitment to this issue is evident and commendable. Given the breadth and urgency of preparedness activities, it seems essential that someone be appointed who can be fully devoted to overseeing flu preparedness strategy across all agencies. The federal government must clearly identify someone who is knowledgeable and has both authority and resources to assume direction of pandemic preparedness programs and to enlist appropriately trained staff to address the array of problems posed by a potentially catastrophic pandemic. Of special importance are the problems posed by the need to provide medical care to an unprecedented number of victims.

• In spite of the often heroic efforts of individual, highly expert federal employees, the federal agencies do not now include the full range and depth of talent and experience required to develop and implement a pandemic flu plan or a strategic defense

against bioterrorist attacks. There is a pressing need to immediately acquire a staff of 50–100, including senior professionals and executives who could assist in establishing pandemic response policies and programs.

• There should be a federal/state task force charged with designing a plan to deliver medical care during a pandemic or mass casualty event. This group should focus on options for dealing with surges in medical demand comparable to those predicted by Flu Surge models for a 1918 type pandemic. Every effort should be made to work directly with the hospital community as well as with governors and mayors to address these urgent problems. HHS should be directed to work with hospital and health care leaders as well as local officials on the state and local level and members of Congress to devise "organizing authorities" that could effectively coordinate medical services during mass casualty emergencies. Funds to institute such authorities should be appropriated

• HHS should distinguish which specific pandemic preparedness are the responsibility of individual hospitals, and for what functions states or the federal government are accountable and create mechanisms to fund and oversee these functions.

• The Congress should appropriate sufficient funds, on an ongoing basis, to allow hospitals to execute specific, clearly identified and measurable preparedness activities. It should charge HHS with responsibility for designing processes, possibly in collaboration with the Joint Commission on Accreditation of Health Care Organizations, for ensuring that these activities are implemented and adequate.

• It would be highly useful for the Administration and the Congress to orchestrate a public "call to service" to the medical care community, to clearly communicate the gravity of the threat of mass casualty events and the need for immediate action on the part of hospitals, health care organizations and providers.

• Federal financing to spur the development of hospital electronic medical records should be considered a national security priority. Federal funds should be contingent on hospitals linking health information systems to other hospitals in their region and to public health authorities.

• Congress should immediately consider the possibility of a large-scale pandemic and hold public hearings on the need to enforce "eminent domain" type authorities over health care assets should such a crisis arise as well as mechanisms to ensure that people who lack health insurance are not denied care or shunted to public or not-for- profit hospitals.

• Congress should establish legal provisions to ensure that hospitals who must forgo routine revenue flows to care for mass casualty victims will remain financially viable throughout the crisis.

• The single most important preparation in coping with a pandemic is education of the public. It will be critical that people understand what they can do to protect themselves and others during a pandemic. In particular, members of the public need to clearly understand that in a pandemic many people will find it difficult to access the health care system and should not expect to visit their doctors unless absolutely necessary.

• The Congress—and elected officials—should be educated on the basic facts about flu and participate in a nation-wide education campaign to prepare the public for a potential epidemic. In particular, leaders should acquaint themselves with the potential advantages and downsides of various interventions intended to contain the spread of flu and be prepared to explain why certain measures are necessary or unfounded. There will be great temptation to "do something" in the emergency. The probable benefits and longer term costs of such measures should be clearly articulated to the public and the cost-benefit of instituted measures should be carefully monitored.

• Employers should be encouraged and incentivized to plan for a major pandemic and in particular to prepare to enable employees to work from home and to avoid the workplace if they are ill. People should be encouraged to prepare to voluntarily remain at home—get themselves out of circulation—at the first sign of flu like symptoms or if they know they were in close contact with someone with flu.

Mr. LINDER. Thank you very much.

Dr. O'TOOLE. Thank you. Sorry to be so long.

Mr. LINDER. Secretary Mitchell?

STATEMENT OF THE HONORABLE DAVID B. MITCHELL, SECRETARY, DEPARTMENT OF SAFETY AND HOMELAND SECURITY, STATE OF DELAWARE

Mr. MITCHELL. Thank you, Mr. Chairman.

Chairman Linder, Chairman Reichert, ladies and gentlemen of the committee, I bring greetings on behalf of Governor Ruth Ann Minner from the First State, the state of Delaware. She brings her greetings, and I, along with my governor, thank you for the opportunity to discuss this most important topic with you here today.

We in Delaware are not unfamiliar with the concept of H5N1 bird flu. There are two issues here. One is avian flu, and one is pandemic flu. On any given day, today for example, on the Delmarva peninsula, we have 110 million chickens. In fact, Sussex County, Delaware, is the greatest poultry producer of any of the counties in the United States. We did in fact have an outbreak of avian flu several years ago, and we were very successful. It was a low-grade flu that infected two poultry farms. We were very successful in containing that. I have to say, that thanks to Secretary Mike Scuse, one of my colleagues, and DDA in the state of Delaware, were very sophisticated in our preparation for that. Our relationship with the poultry industry, I have to say, is second to none.

When it comes down to pandemic influenza, fighting from a homeland security perspective, one of our accomplishments in Delaware was to prepare for what some say may happen, others say will happen, with the enactment of our Emergency Health Powers Act. It gives the Division of Public Health and the Department of Safety and Homeland Security the authority to obtain quarantine and isolation orders in an expedited manner.

It also contains provisions protecting the due process rights of individuals who are subject to a quarantine or an isolation order. By "isolation," I am saying that in fact we know you are infected with H5N1 bird flu, and so we will, if necessary, isolate you, if necessary against your will, for the better good of our community. By "quarantine," I am saying that you have been exposed, and I am not sure if you have it, but we will isolate you until that determination is made.

That type of isolation and quarantine has been tested in our Third Circuit of the federal judiciary. It has passed muster constitutionally, provided that there is a due process opportunity, which raises all kinds of issues. How do you bring someone before a member of the judiciary if they are infected with H5N1 bird flu? Well, I had that discussion with our Supreme Court and other members of the bench in Delaware just last week. We proposed to do it by video, but even that brings up all kinds of issues about whether or not. We certainly do not want to contaminate an inmate population. We are working through these issues, in fact, as we speak.

The Intrastate Mutual Compact that we have is another major accomplishment. It gives us the opportunity across jurisdictional lines within our state and between states, to help one another out. With our proximity being that close to Maryland, New Jersey and Pennsylvania, we do rely on each other, as well as in the great state of Virginia.

With regard to federal funding, resources have supported many of our objectives, including effective communications. We heard, as we know in Katrina, the issue, as is often the case in any crisis, is our ability to talk to one another. Thank you for your federal support to our 800 MHz system. We do have coverage that is about

99 percent effective throughout our great state. Our in-building coverage is about 66 percent, well on its way to becoming 85 percent in compliance, so that we will have not only coverage outside of any structure, but inside of any structure. When I say "coverage," I am talking about transportation systems talking with the police, firefighters, emergency responders and others.

We also have benefited from your support to the Delaware Information and Analysis Center, which is a hub that collects not only intelligence from our local officers up through and up to the Department of Homeland Security, but it receives information from the Department of Homeland Security and our federal resources that we disseminate locally. It is our hub where have situational reports given the threat that we face, that we would put that information out daily and so forth.

We hope that enhancing the federal-state partnership will be the order of the day. Our line of communication with the Department of Homeland Security, I have to say, is very clear. I have an outstanding relationship with my colleagues on the federal level, and we are very fortunate. I cannot speak for all the other states, only for the state of Delaware, probably because of our proximity, that we are in contact so frequently.

But we need to continue to foster and support that partnership. Our federal partners need to continue to hold public meetings and summits to keep the lines of communication open. Delaware looks forward to a federal partnership that highlights best practices. That is something the federal government can do, tell us what best practices are occurring where, so that we can consider on a local level what might work in our state, recognizing that one size does not necessarily fit all.

We also need continued federal funding to increase our ability to gather accurate information and to disseminate that information, in fact, to the public. Our success depends on that coordination and cooperation. We are here to extend a hand to continue that partnership with our federal allies. We support the president's vision as to whether or not 85 percent should go to the issue of pharmaceuticals. That is an issue that is well beyond my realm of expertise.

I am here to say that our line of communications is open; that we have an outreached hand; we look forward to continuing to work with our federal partners.

We thank you for the opportunity to be here today.

[The statement of Mr. Mitchell follows:]

PREPARED STATEMENT OF THE HONORABLE DAVID B. MITCHELL, J.D.

INTRODUCTION

Good afternoon, Chairman King and members of the Subcommittees. I am David B. Mitchell, Secretary of the Delaware Department of Safety and Homeland Security. On behalf of Governor Ruth Ann Minner, I am honored to be here today to address the important issue of homeland security as it relates to pandemic influenza. I would like to thank you for your support of the many initiatives now in place that have enhanced homeland security and emergency preparedness at the federal and state level.

The most recent concern of avian influenza mutating into a form that leads to a human pandemic is a topic not unfamiliar to Delaware, since we are a leading poultry producing state. I would like to open my statement today with an explanation of Delaware's experiences with avian influenza prevention and response in our animal or poultry population. I will then move on to discuss with you our response to

human pandemic influenza and how we can enhance our federal-state partnership and allocate resources wisely.

Each year, Delaware poultry growers produce approximately 240 million chickens. Tyson Foods, Inc., Perdue Farms, Inc., Mountaire Farms, Inc., and Allen Family Foods are the major poultry companies with growers or facilities in Delaware. However, there are also numerous other smaller commercial and non-commercial poultry producers in Delaware. On any given day, there are approximately 110 million chickens on the Delmarva Peninsula. As one of the largest poultry producing states in the nation, the risk of exposure to avian influenza within the poultry industry is high. Of even greater significance is the risk of exposure within the human population of an influenza pandemic. The avian influenza virus presents two potential crises with serious consequences to the State of Delaware. First, an outbreak of the avian influenza virus within the State's poultry population may have a severe negative impact on Delaware's economy. Secondly, and of greater significance, is the possibility of an influenza pandemic which would have grave consequences for the public health in Delaware.

In recognition of its unique situation, the Delaware Department of Safety and Homeland Security (DSHS) and its Divisions, Delaware Emergency Management Agency (DEMA) and the Delaware State Police (DSP), have succeeded in creating close partnerships and working relationships with the Delaware Department of Agriculture (DDA), the Department of Health and Social Services and its division, the Division of Public Health (DPH), local law enforcement, the Delaware National Guard and the Dover Air Force Base in an effort to develop a seamless preparedness and emergency response plan.

AVIAN INFLUENZA—IMPACT ON DELAWARE'S POULTRY INDUSTRY

In February 2004, the DDA and several Delaware agencies joined forces to contain a low pathogenic avian flu virus identified in flocks at two Sussex County farms. At the time of the initial outbreak, the DSHS, through its Division, DEMA, already had in place the Delaware Emergency Operations Plan (DEOP) for emergencies arising from natural or human-made disasters. The DDA immediately implemented its emergency support functions under the DEOP and another division of DSHS, the Delaware State Police, came in to support the DDA in its efforts to contain the avian flu virus. Further, the Delmarva Poultry Industry Inc. (DPI), a nonprofit industry association, had already created an emergency disease task force in response to an avian influenza outbreak that occurred in the early 1980s in Lancaster, Pennsylvania. A Memorandum of Understanding creating a partnership between the DDA, DPI and other states within the Delmarva Peninsula enabled the DDA to also convene the DPI's Emergency Disease Task Force. Because the outbreak did not involve a bird-to-human or human-to-human transmission, DDA acted as the managing agency. The Delaware State Police, in conjunction with local private security officers, was immediately mobilized to assist the DDA in setting up a quarantine of the infected farms, setting up a barrier to prevent reporters and other curiosity seekers from trespassing onto the farm, and providing lines of communications between the DDA, the press and the public about the status of the crisis.

Despite the quarantine order and admonitions by the DDA and the Delaware State Police that it was necessary to stay away from the infected farms to prevent spread of the virus, reporters attempted to enter the quarantined area through any means available. Some flew helicopters to gain access to the farms; others trespassed at night with night vision equipment to photograph poultry, houses and growers. Through coordination between DSHS, DDA and DPI, efficient implementation of the DEOP, and effective communications between DDA, the Delaware State Police, DPI and the public, Delaware successfully quarantined the two farms and contained the virus.

Delaware's success in containing the virus in 2004 has earned it national attention as a leader in how to respond to avian influenza as it pertains to poultry. Under the DDA's poultry regulations, all commercial or non-commercial premises where live poultry is kept must be registered with geo-referenced coordinates of all chicken coops. Vehicles, crates, coops and footwear used for sale or transfer of poultry out of state must be in a completely clean condition prior to leaving or returning to Delaware and is subject to inspection. The DDA requires all poultry growers to maintain detailed records of their poultry.

Producers are required to participate in several testing programs to ensure their flocks are free from any potentially hazardous forms of avian influenza. Thanks to a partnership between the DDA and the University of Delaware, the DDA is able to conduct onsite testing of every flock and receive test results within 3 to 4 hours. At present, the test can quickly identify the potential harmful "H" factor of the

avian flu, but additional testing must be conducted in order to identify the "N" factor. Any flock found to have avian influenza is immediately depopulated and disposed of onsite in an environmentally acceptable manner and the coops disinfected for reuse.

Delaware is one of five states to implement an Indemnity Program which utilizes state and federal funds to reimburse poultry producers for flocks lost due to depopulation by DDA. This permits the State of Delaware to immediately respond to the threat of the spread of an avian flu virus without delays and, as an additional benefit, encourages poultry growers to report an infected flock in a timely manner. The continued success of its program is dependent upon efficient recognition and reporting of an emergency poultry disease. Because Delaware is one of the largest poultry producing states in the nation, continued funding from the federal government is necessary to ensure that Delaware can continue its research to completely and expeditiously identify a highly pathogenic avian flu virus with the potential to mutate to a form adaptable for human to human transmission. Further, federal funding is also necessary to ensure the viability of Delaware's Indemnity program. From a homeland security perspective, fighting the pandemic influenza from the frontlines includes, in large part, preventing the spread of avian influenza through the development of strict regulations, rigorous testing and an effective emergency response plan as it pertains to Delaware's poultry industry.

PANDEMIC INFLUENZA—FIGHTING FROM A HOMELAND SECURITY PERSPECTIVE

The U.S. Department of Health and Human Services' (HHS) Pandemic Influenza Plan recognizes the important role that Homeland Security and state and local law enforcement agencies have in the overall success of the plan and offers detailed guidance to local law enforcement regarding their involvement in the execution of their state and local pandemic influenza plans.

In September 2005, with the guidance of the HHS Pandemic Influenza Plan, Delaware completed its Pandemic Influenza Plan. In recognition of the important role of the Department of Safety and Homeland Security and State and local law enforcement play in a pandemic influenza situation, DSHS and state and local law enforcement agencies, with the Delaware National Guard, DEMA and other state agencies have conducted extensive drills, table top exercises and incident command training geared towards early, quick and effective response to a pandemic influenza event and allocation of resources in the most effective and efficient manner.

In November 2005, more than 100 participants gathered to take part in a Pandemic Influenza Table Top Exercise tackling tough issues like isolation and quarantine, continuity of essential services and businesses, medical surge capacity, infrastructure security, mass fatality and public education. The exercise was a great opportunity for Delaware's agencies to coordinate their individual roles, exchange information and concerns, network and review emergency plans. Delaware will hold its Pandemic Influenza Summit on February 21, 2006 with Governor Ruth Ann Minner and other local and federal representatives, including keynote speaker U.S. Surgeon General Richard Carmona. The Summit will give Delaware the opportunity to discuss Delaware's Pandemic Influenza Plan and to exchange information with its federal partners to ensure the continued development of a seamless, flexible and practical preparedness and emergency response plan.

A. The Emergency Health Powers Act

The Department of Safety and Homeland Security, Delaware State Police, DEMA, Division of Public Health, Delaware National Guard, and the Dover Air Force Base are actively working together to develop an effective quarantine and isolation plan. One of Delaware's accomplishments has been the enactment of the Emergency Health Powers Act, which gives the Division of Public Health and the Department of Safety and Homeland Security the authority to obtain quarantine or isolation directives and orders in an expedited manner during an influenza pandemic. Prior to a Declaration of a State of Emergency by Governor Ruth Ann Minner, the Public Health Authority under DPH may obtain a quarantine or isolation order if it has been established that a person or persons pose a significant risk of transmitting a disease to others with serious consequences. Once a State of Emergency has been declared, the Public Safety Authority under DSHS has the authority to obtain quarantine and isolation orders. Both the Public Health Authority and the Public Safety Authority have the ability to request that an order be granted on an ex parte basis and both have the authority to issue directives permitting state and local law enforcement to detain the person or persons pending the issuance of an isolation or quarantine order. Further, the Emergency Health Powers Act contain important provisions protecting the due process rights of individuals who are subject to a quar-

antine or isolation order, such as ensuring that persons quarantined or isolated under an ex parte order receive a hearing within 72 hours.

Currently, the Delaware Department of Safety and Homeland Security and Division of Public Health are working with Delaware's state courts to create form petitions for *ex parte* quarantine and isolation orders to help expedite the process of obtaining orders under which law enforcement can legally act. The goal is to create petitions easily recognizable to a judge or clerk of the court as urgent. Furthermore, both agencies are working with the courts to establish a judge-on-call who can act as the primary responder to an emergency petition to quarantine or isolate as well as a set policy and procedure for responding to an influenza pandemic.

Although the judges in Delaware are not considered first responders, they play an important role in determining what legal authority law enforcement has to enforce a quarantine or isolation order and to the extent of that legal authority. It is further expected that judges will continue to play a role during a pandemic as they will be asked to issue other orders, such as orders of contempt against those persons who violate the quarantine or isolation orders or to determine law enforcement's authority to, for instance, restrict travel across State borders. Currently, efforts are being made to protect judges from being exposed to the virus when they are called upon to preside over hearings related to quarantine and isolation orders. For example, Delaware is looking at the possibility of conducting hearings from a remote location through videoconferencing or providing judges with protective gear when conducting such hearings.

B. The Delaware Emergency Operations Plan and Pandemic Influenza Plan

The Incident Command System has been incorporated into the Delaware Emergency Operations Plan. The Department of Safety and Homeland Security and the Delaware State Police are the primary agencies in command of security and law enforcement and in charge of communications when there has been a declaration of a state of emergency. Delaware's Pandemic Influenza Plan, issued in September 2005, also provides that the Delaware State Police shall act as a supporting agency in the way of crowd control, traffic control for vaccination clinics, enforcement of quarantine and isolation orders and directives, and transportation of shipments of vaccines to designated receiving sites. Until there has been a declaration of a State of Emergency, the Delaware State Police shall only act as a supporting agency to the local jurisdiction in which a quarantine or isolation order has been issued by the Division of Public Health. The Delaware State Police will only assist when help is requested by that local jurisdiction. DSHS, the Delaware State Police and local law enforcement also have the ability to enter into mutual aid agreements if the emergency escalates.

1. ***The Intrastate Mutual Aid Compact***

As part of Delaware's incident command training and its efforts to minimize local jurisdictional lines during an emergency, Delaware recently enacted the Intrastate Mutual Aid Compact which creates a system of intrastate mutual aid between participating political subdivisions and fire, rescue and emergency medical service provider organizations in Delaware. The Compact provides for mutual assistance in the prevention of, response to, and recovery from, any disaster that results in a formal state of emergency in a participating political subdivision. The Compact has also created a committee to review the progress and status of statewide mutual aid, assist in developing methods to track and evaluate activation of the system and to examine issues facing participating political subdivisions and fire, rescue, and emergency medical service provider organizations regarding implementation.

From a homeland security perspective, the Intrastate Mutual Aid Compact permits state and local law enforcement to cross in-state jurisdictional lines to provide or receive aid from neighboring local jurisdictions and promotes integration and intra-operability between state and local law enforcement resources as a cohesive and fluid process.

Once there has been a declaration of a State of Emergency, the Delaware State Police creates a task force comprised of representatives from each of the local law enforcement agencies, which then convenes to coordinate emergency law enforcement response, allocation of resources, communications and assignments of personnel. It is imperative that intra-operability, information gathering, analysis and dissemination between agencies and the public be transparent, fluid and efficient. Delaware recognizes that intra-operability between first responders and other necessary emergency personnel is key to the success of any emergency preparedness plan. Federal funds are always necessary to assist Delaware in acquiring and maintaining state-of-the-art technology which would promote continuity of operations during an emergency involving the containment of a lethal virus or disease.

STATE ALLOCATION OF FEDERAL RESOURCES

Federal funding and resources have supported many of Delaware's main homeland security objectives including effective communication between first responders, information gathering, analysis and dissemination, intra-operability between local jurisdictions, agencies and the business and private sector, and public education and awareness. Funding received from the federal government has also enabled the Department of Safety and Homeland Security to make significant strides in the development of an "all hazards" approach to our preparedness and emergency response plans. Funding at the federal level is necessary to ensure that Delaware can continue to develop plans which are flexible enough to adapt to different types of emergencies, yet specific enough to effectively and efficiently respond to those emergencies. Finally, fighting the pandemic influenza from the frontlines means maintaining a strong focus on prevention and response. Delaware must place its efforts in preventing the virus from entering its State borders and on ensuring success in the execution of an immediate, effective and proficient emergency response plan.

DSHS understands the importance of being able to equip Delaware's first responders and state and local law enforcement with the tools necessary to successfully fight an influenza pandemic from the frontlines. A substantial amount of federal funds Delaware has received has been allocated to the purchase of decontamination equipment, protective suits and masks, communications equipment, all terrain vehicles for rescue and recovery in extremely rough terrain, chemical detection kits, security cameras and night vision equipment. State and local law enforcement agencies are working with the Delaware Division of Public Health to ensure that they, as first responders, and their families receive antiviral vaccinations that should offer protection against the virus. Further, the DSHS, in conjunction with DEMA and the Delaware State Police are designated as the primary agencies for keeping the lines of communication open between agencies and the public and disseminating accurate information to the agencies and the public as a pandemic unfolds.

The Department of Safety and Homeland Security is using state of the art telecommunications technology to create a 24 hour, 7 day a week, center from which information and intelligence data may be received, analyzed, processed, and disseminated to the private and public sector in a consistent and reliable manner. The Delaware Information Analysis Center (DIAC) will be key in maintaining open lines of communication between state and local law enforcement and other first responders. It will also serve to expand DSP's intelligence capabilities allowing a host of law enforcement agencies including the FBI, State and local police to share information regarding possible terrorist and bioterrorist threats. As part of the DIAC, DSHS is developing a geographical information system (GIS) and looking at the option of installing global positioning system (GPS) and automatic vehicle locator (AVL) devices in all modes of transportation used by first responders.

As a result of federal funding, Delaware has been able to enhance its 800 MHz Digital Trunked Radio System to improve intra-operability for all state, county and local government agencies, fire, police and emergency medical services and to improve communications within buildings through the use of vehicular repeater systems. Currently, there are over 40 different agencies on the system, using approximately 12,000 mobile and portable radios and making over 115,000 calls on a typical day. The 800 MHz System also provides interoperability in the jurisdictions surrounding Delaware that have systems which are compatible with Delaware's system. Delaware's goal is to enhance the system to resolve current system deficiencies. This $52 million project will provide in-building coverage throughout the State, through the use of tower sites, bi-directional amplifiers, and vehicular repeater systems. It will also expand the number of dispatch consoles from 54 to 123 while standardizing and improving redundancy within and between all 911 Centers, upgrade the radio systems platform to extend its lifecycle, enhance intra-operability with agencies that are not on the 800 MHz system today, such as Public Works, and enhance interoperability with jurisdictions surrounding the State who use systems which are not compatible with Delaware's system. The State would like to also expand the microwave network that connects the radio system so that it can support the traffic and reliability needs for other telecommunications services requirements in the state. While the $52 million allocated for this project will help to upgrade systems currently being used by Delaware for emergency response, additional federal funding over the next 5 to 7 years will be necessary to meet the prevention and emergency response needs of Delaware as it strives to keep pace with ever evolving technology.

Delaware has also been involved in other projects to enhance the state's ability to stay informed of events as they unfold throughout the state and to allocate resources where they are most needed. Recently, Delaware State Police and Kent

County Emergency Services purchased new high-tech Mobile Command Centers which have been fully customized with state of the art technology and telecommunications to assist those who need help as quickly as possible at the scene of an emergency. Additionally, the Delaware State Police enhanced their medical transport service with the purchase of new aircraft to provide 24-hour, 7-day a week emergency helicopter transport statewide.

Educating the public prior to the onset of this crisis is crucial. The Department of Safety and Homeland Security is providing an all hazards personal preparedness message to Delawareans by promoting the U.S. Homeland Security Ready campaign. Residents are encouraged to create a plan, make a kit and know potential threats. DEMA also provides personal preparedness training in communities statewide through its Citizen Corps program. Delaware has earmarked the Phase 1 Federal Pandemic Influenza funds it has received for public education. The Division of Public Health has implemented a public outreach program to educate Delawareans about pandemic influenza and personal preparedness. One component of the program is a series of public informational meetings hosted in communities throughout the state. Public Health officials will also provide citizens with information on assembling a personal emergency kit with the essential items including health supplies, food and water. Brochures have been created for the special needs population in Delaware on how to prepare for and respond to general emergencies. The brochure advises people with disabilities and other special needs to maintain a contact list of medical suppliers, pharmacies, doctors, family members and friends they can rely on during an emergency. It also provides information on how to create an emergency preparedness kit.

ENHANCING THE FEDERAL-STATE PARTNERSHIP

Delaware will continue to look to the federal government for guidance and support during the development of its plans to manage an influenza pandemic. It is important that our federal partners continue to hold public meetings and summits to keep the lines of communication open. Public meetings are needed in each state to share information with local residents. Delaware looks forward to a federal partnership to highlight best practices. It is vital that we learn from each other. Sharing expertise and lessons learned can save states valuable time and money. Delaware also needs federal funding to implement these best practices, which may include the purchase of state-of-the-art equipment and technology or the institution of innovative programs designed to prepare its agencies, the private and business sector and its citizens for a worst case emergency scenario. Fiscal restraints should not interfere with the States ability to take appropriate safety measures to protect its citizenry. In the face of the varying messages from different facets of the media, federal funding and support continue to be necessary to increase Delaware's ability to gather accurate information and disseminate that information to the public. Our citizens rely on state officials to provide them with timely accurate information. Providing funds to develop the Delaware Information Analysis Center and 800 MHz System will promote accurate dissemination of information to the public and enhance rumor control. Finally, support from our federal partners should come in the form of ongoing joint summits and federal and state exercises and drills. Exercises help states form invaluable relationships with state and federal contacts important in emergencies. Experiences gained during drills and exercises will prove beneficial in the event of emergency.

The success of the Delaware Pandemic Influenza Plan, and any other pandemic influenza plan, depends on the cooperation and coordination between law enforcement and other agencies on the national, state, and local level. Effective forms of communication and accurate dissemination of information as the pandemic progresses will lessen the chance of overstating or understating the risks inherent in this type of a crisis. One thing is for certain: we must stay ahead of the H5N1 avian flu virus. Constant preparation, planning, testing, and development of Delaware's Emergency Operating Plan and Pandemic Influenza Plan will result in an effective and meaningful preparedness and emergency response plan to the pandemic flu.

Mr. LINDER. Thank you, Secretary Mitchell.

Ms. Phillips?

STATEMENT OF FRANCES B. PHILLIPS, HEALTH OFFICER, ANNE ARUNDEL COUNTY, MARYLAND DEPARTMENT OF HEALTH

Ms. PHILLIPS. It is my pleasure, Chairman Linder and Chairman Reichert and distinguished members, to address you today on the

vital role that local health departments and our community partners play on the frontlines in pandemic influenza planning and response.

Local health departments hold the potential to minimize the impact of a pandemic, and in fact local public health action can determine the initial and perhaps ultimate impact of such a crisis in the United States.

What I would like to do is very briefly describe what it is that local health departments across the country are now doing, and the crucial link between this public health work and our public safety agencies. I will base my remarks on my experience in Anne Arundel County.

As you may know, Anne Arundel County is in the Baltimore–Washington corridor, a county in Maryland, home to just over 500,000 county residents, as well as our historic capital, Annapolis. Our county is also home to many very important federal landmarks, such as the United States Naval Academy, Fort Meade Army base, the National Security Agency, and other federal installations, the Chesapeake Bay Bridge, and of particular interest for this topic is the Baltimore–Washington Thurgood Marshall International Airport.

In my experience, over 13 years as a health officer in Anne Arundel County, our department has faced a number of local public health crises, certainly ranging from the full mobilization on 9/11, and then the subsequent anthrax attack in 2001. We have had severe weather emergencies, smallpox preparedness, as well as the SARS emergency in 2003.

We have also dealt with more moderate public health crises, including hepatitis, tuberculosis, and West Nile outbreaks, as well as the national seasonal flu vaccine shortage in 2005. And then on a day-to-day basis, we face urgent public health issues such as well water contamination, respiratory outbreaks in nursing homes, and meningitis cases among schoolchildren.

I had the opportunity in 2004 to have a very rewarding opportunity, I should say, to serve as an interim fire chief for my county. In making this appointment, the County Executive reflected on the number of instances in our county where the health department and the fire department jointly addressed local emergencies, and how both agencies share a common commitment to the protection of the public safety of our residents. I found in my tenure with this large metropolitan fire department, I found more in common between the two agencies than that which is different.

With regard to pandemic planning, not only must we take an all-hazards approach, but we must definitely plan for the integration of local, state, federal and nongovernmental response agencies. Fundamental to this organization, this integration, is the shared command and management framework which the National Incident Management System provides. This is the common underpinning across public health and public safety.

In my department, with a staff of over 850, every single person in my health department has been trained in basic preparedness, using the NIMS model, some much more skilled than the basic level. Readiness for the possibility of a 24/7 emergency call-up is a condition of employment in my health department. So every

school nurse, for example, every addictions counselor, every restaurant inspector has a basic understanding of what their role would be in an emergency. We have both exercises, and we have had real-time experience with this call-up.

I would like to name just four areas of unique local public health activity with regard to pandemic preparedness. The first has been mentioned, and that is disease surveillance. We need and we have a system across the country of surveillance so that when an astute clinician either diagnoses or suspects a case, that suspicion can be reported to a public health authority able to interpret and to respond on that report. That is the basic infrastructure and local health departments are the boots on the ground, so to speak, with regard to our nation's surveillance system. Every year, my department receives 4,000 communicable disease reports, which then trigger over 2,100 disease investigations.

A different kind of surveillance is demonstrated by an incident that occurred within the last 2 weeks at BWI airport. On a commercial carrier, the pilot radioed ahead that there was a sick passenger on board and that that passenger had had extensive Southeast Asian travel. What occurred at the point of landing was a very rapid response where, taking isolation for caution, the patient was evacuated to a nearby hospital for emergency evaluation. Within the hour, about two dozen state, local, federal and representatives of the commercial carrier were convened, and a response plan initiated.

Surveillance is one. The second unique role that I would like to briefly mentioned, and has been mentioned, community awareness and self-sufficiency. Pandemic is going to involve all sectors, as has been said. It is a pan-societal crisis. In my department, we have been briefing over the past several months every sector in our county, certainly our other public safety and other county agencies. We have been working very closely with personnel from the Naval Academy, from Fort Meade, from NSA, working on their contingency plans; our school systems, our hospitals, our church and faith-based organizations, and I have to say our business community. Large employers in our county are very anxious to understand more about pandemic influenza preparedness so that they can put forth their continuity of operations plans.

Thirdly, community infection control. When we think about an outbreak of this kind of infection, certainly the issue of isolation and quarantine comes forward. As has been mentioned, many states have beefed up the legal underpinnings to take some unprecedented actions with regard to ordering individuals and to taking control of private property. At my level, we are right now working on an inventory of alternative housing for individuals who would need to be in respiratory isolation, as well as working on the social and the medical support that these people would need to stay homebound.

We had a little bit of experience with this with the SARS emergency. We had some people who were in a voluntary home isolation. We had 100 percent compliance, but we certainly believe that that may not be the future with pandemic and we need to rely on our public safety partners for security.

Lastly, mass vaccination and medication distribution. The role of local health departments, when a vaccine is available, an effective vaccine, is to take delivery of that vaccine and to distribute it to all county residents. In our county, we have not had, of course, the experience with pandemic, but last year in 2005, with the flu vaccine crisis, we had a situation where thousands and thousands of residents were very anxious for their flu shots. We mobilized, with the help of our EMS and our police department. High-school-based mass clinics, using all of our staff, were able to vaccinate on two Saturdays, 6,800 people at a rate of 670 doses an hour.

In conclusion, as far as federal leadership, I do commend the federal government for this proactive approach and engagement on the issue of pandemic flu. I have submitted some written recommendations with regard to the federal role. Suffice it to say that it is key that there is a collaboration at the very highest levels of the federal government, because for us on the ground it is very important that that collaboration result through state and local grantees in a reinforced and consistent message. I urge the Department of Homeland Security, for example, to engage with us, local public health practitioners, as they go forward with their pandemic flu plan.

So on behalf of the National Association of City and County Health Officials and our membership, I commend you for your leadership on this topic. Thank you.

[The statement of Ms. Phillips follows:]

PREPARED STATEMENT OF FRANCES B. PHILLIPS

It is my pleasure, Chairman Linder, Chairman Reichert, and distinguished Members, to address you today concerning the vital role of local health departments and their community partners in homeland security on the front lines in pandemic influenza planning and response.

The combined efforts of local health departments and our colleagues in first response will determine the initial, and in many ways, the ultimate impact of an influenza pandemic in the United States. In my presentation, I will describe how local health departments are planning our response to a worldwide influenza outbreak, with an emphasis on how the success of those plans relies on the crucial linkages that have been built between local public health departments and a range of community partners.

For nearly 13 years I have directed a large local health department serving a population of about 500,000, including residents of our historic state capital, Annapolis. Anne Arundel County is also home to many national landmarks such as the U.S. Naval Academy, Fort Meade Army Base, the National Security Agency and other federal installations and the Chesapeake Bay Bridge. In terms of pandemic flu, the landmark about which I am most concerned is the Baltimore Washington Thurgood Marshall International Airport. Collectively, these landmarks have resulted in a relatively high "vulnerability index" of security threats to the county.

Heightened awareness of the potential vulnerabilities is something all the response entities in our jurisdiction share. For years, we have been engaged with our police, fire and rescue, emergency management and other counterparts in planning and exercising for local emergencies. As in the rest of the country, this type of cooperative work intensified after September 11, 2001, building on the mutual understanding that we all have our part to play in any unfolding emergency.

In 2004, I had the unique and rewarding opportunity to serve as Acting Fire Chief for an interim period in my county. In making this decision, the County Executive reflected on the number of instances in which both fire and health departments had jointly addressed local emergencies, and how a common commitment to protecting the safety of county residents was central to the appointment. So often we hear about the differences that exist among the emergency disciplines—but this core mission that we share is key.

I found more that was common to public health during my tenure with this large metropolitan fire department than was different. There were areas where each

agency could—and did—benefit from an exchange of expertise. For example, learning from public health's proficiency in prevention and outreach to diverse communities, including those with special needs, was a gain for the fire department. Likewise, the fire department's expertise in incident management and chain of command accountability has proven to be of great utility within the health department in a range of emergency situations.

My department, with a staff of about 850, has experienced a wide array of emergencies, just in recent years. We have had direct experience mobilizing emergency operations in the face of the 9/11 attacks and subsequent anthrax attacks of 2001, severe weather situations, tuberculosis and hepatitis outbreaks and the SARS emergency of 2003. We have also faced more moderate, but nonetheless challenging events, such as the West Nile Virus outbreak and the national flu vaccine shortage of 2005. And of course, on a daily basis we are confronted with localized but urgent public health issues such as well water contamination, respiratory outbreaks in nursing homes and meningitis cases among school children. All of these experiences are vital to building a workforce prepared to respond in the face of a prospect as daunting as pandemic influenza. My remarks today are based on lessons learned from these real world events.

Pandemic Influenza Preparedness Must be Integrated into All-Hazards Preparedness

Local emergency preparedness is based on an 'all-hazards' approach. This approach requires communities to assure the essential capabilities necessary to respond to a wide range of emergencies: intentional or naturally occurring infectious disease outbreaks; chemical, explosive or radiologic accident or attack; weather-related disaster; or other emergency.

Since 2001, with the elevated awareness of the country's vulnerability to intentional attacks with biological agents, there has developed a better understanding of public health's unique role in protecting the homeland in this kind of scenario. Whether the communicable disease threat is a novel influenza virus, smallpox, anthrax, West Nile Virus, SARS, or other emerging pathogen capable of causing widespread illness and death, there are a core of universal public health response capabilities for which local health departments across the country are planning, training and exercising.

However, those health departments do not and cannot stand alone. All planning and response must be integrated with other local entities, most notably public safety first responders, but also state, federal and non-governmental partners. Fundamental to such integration is a shared command and management framework. With its strong foundation in the Incident Command System, the broader National Incident Management System (NIMS) developed under Homeland Security Presidential Directive 5 provides this common underpinning for all public health and public safety preparedness. Over time, adoption of NIMS will continue to facilitate the integration of language, mental models and even certain cultural aspects of public safety by public health professionals.

Pandemic influenza planning is a section of our county's Health/Medical Annex—the "ESF (Emergency Support Function) #8 Chapter"—within the county's all-hazards plan. This is typical and it demonstrates the integration of the influenza response into an all-hazards approach. Although it is located in the Health/Medical Annex, which contains the core response elements for a disease outbreak, the roles in executing the response span the gamut of other emergency disciplines, as they do for any other targeted scenario within an all hazards plan.

Key Elements of Front Line Pandemic Influenza Preparedness

1. Disease Surveillance

The purpose of a strong surveillance system is to create time in which to intervene and eliminate or mitigate threats. In local public health, practical disease surveillance means a system by which clinicians in private practice or in hospital settings can detect and report a novel flu virus or a suspect case to a public health authority capable of receiving, interpreting and responding to such a report. Ultimately, the country may reach a point where electronic medical records and associated systems will enable automatic reporting of diseases or suspicious symptoms, but such capability will be immensely challenging in this intensely diverse and complex national environment. We cannot wait, nor can we depend solely on technology when so much is at stake. Our greatest strength is in our American workforce—our astute clinicians, our trained healthcare professionals, our alert hospitals—and the effective partnerships that are forged between this community and capable local public health departments. It is important not to underestimate the immediate and important utility of this model of disease surveillance.

Local health departments are the 'boots on the ground' elements of our nation's disease surveillance system. In my department, we receive 4000 communicable disease reports each year from our partner hospitals and physicians. Typically, these reports involve infectious diseases such as tuberculosis, AIDS, or measles. These reports generate over 2100 disease investigations conducted by public health, with our staff conducting patient interviews, performing contact tracing and, where indicated, beginning prophylactic treatment of persons who have been exposed.

One less typical but important example of public health surveillance recently occurred when the flight crew on a commercial aircraft bound for BWI airport reported a sick passenger returning from extensive travel in Asia. Upon arrival, the individual was immediately transported to a nearby hospital for evaluation. Within the hour, nearly two dozen local, state and federal agency personnel, along with representatives of the carrier, had been alerted and a response plan initiated.

2. Community Awareness and Self-Sufficiency

As the BWI incident demonstrates, planning with a broad range of partners meant than when a real situation arose, the right people were there quickly. In the specific case of pandemic influenza, there is a continuing need for not only governmental, but also corporate and community sectors to be informed about pandemic influenza and to understand their potential roles in a response.

At a local level, the health department is regarded as the source for reliable and practical information, specific to the community. For months my department has conducted continual 'customized' education sessions on avian and pandemic influenza to all sectors, beginning with our police, fire, emergency management and pubic works departments. We have held ongoing briefings with the Naval Academy, Ft. Meade and NSA personnel; our school system, hospitals, and nursing homes. The business sector, faith-based and community-based organizations have all sought our information and guidance on preparing for a major flu outbreak.

My department serves a key consultant to county government and several large corporations in developing their continuity-of-operations plans to address prolonged and widespread absenteeism. We have a cadre of trained presenters, as well as a very active website, public sector cable television channel and strong media relationships to assist with these broad communications efforts.

We are not alone in conducting such education. Across the country, some innovative partnerships between public health departments and the private sector are emerging. Whether it is educating their employees through distributing information on preventive measures or volunteering to coordinate points of dispensing on corporate campuses, some companies are showing interest in playing a part in the larger response.

There is a tremendous desire for information regarding pandemic influenza across all sectors and a great deal of work ahead for local health departments in spreading the word, but this effort will be worth the return if we can reduce panic and increase creative response options if the need ever arises.

3. Community Infection Control

Over the past several years, the legal foundation required for public health to adequately protect the public in a catastrophic health emergency has been significantly strengthened in many states. Both state and local health departments have closely examined our respective responsibilities to isolate or quarantine persons; to control private property or otherwise intervene in private activities. All these would be unprecedented actions, requiring enormous pre-planning. In my county, for example, we are developing an inventory of alternative housing suitable for persons requiring respiratory isolation. We are identifying sources for the medical and social supports should large numbers of people be confined at home. These partners will be a major part of the success of any critical effort to minimize the spread of disease.

Our experience with placing a few SARS suspects in home isolation has been instructive. We experienced 100% compliance, but recognize a pandemic circumstance could be radically different. In such situations, we may call on our public safety partners to assist with security. We recognize the importance of making sure they are educated about risks and are knowledgeable about what prophylaxis is available and the need for any personal protective equipment.

4. Mass Distribution of Vaccines and Medications

Timely development of an effective vaccine, in sufficient quantity to immunize the population against a novel virus, is a huge challenge that the Federal government has taken important steps to confront. Local health departments are responsible on the ground for accepting delivery of the Strategic National Stockpile in which such a vaccine or anti-viral medications would be stored. Mindful that we do not now have the ability to manufacture sufficient quantities of such countermeasures, we

must still have in place all the planning, staffing and public information systems necessary to promptly distribute them to all priority populations in the county.

While we've not experienced a pandemic, local health departments have had parallel experiences and exercises that have tested our ability to provide mass vaccine and medication distribution. In our case, in October 2001, we rapidly mobilized mass clinics to distribute ciprofloxacin to U.S. Postal Service or U.S. Senate employees potentially exposed to anthrax while working. During the 2004 seasonal flu vaccine shortage, with delayed shipments causing the public to become extremely anxious to get their flu shots, our department gave over 6800 doses in two days, at a rate of 670 doses an hour.

This effort demonstrated the value of a thoroughly trained and responsive public health workforce. In my department, every staff person, from school nurse to addictions counselor to restaurant inspector, is required to be trained, at a minimum, in basic emergency preparedness using the NIMS model.

Yet again, we could not have managed this mobilization without the full support of our police and fire departments, who provided security, essential traffic control, and necessary emergency medical transport capacity at the high school-based mass clinics. These are no minor feats in a mass setting, especially in a real life situation where emotions are running high and the chance of panic is never far away. The public already has benefited greatly from the collaboration between public health and public safety agencies. Only through a highly coordinated and very broad "pan-social" approach will we achieve maximum homeland security in the face of an influenza pandemic.

Federal Leadership

It is a positive step that so many in this country are paying attention to pandemic influenza before we find that threat a reality. We often tend to focus on the last event, but in this case the focus has been on being proactive—a fact which is evidenced by the very existence of this hearing. Your leadership on this issue is appreciated.

However, there doesn't always appear to be the same sort of cooperation and coordination occurring at the Federal level among the various agencies involved in pandemic influenza preparedness as there is even in Anne Arundel County. Leadership questions in the event of a biological attack have been debated by Federal agencies in the press. Should the Department of Homeland Security (DHS) be at the forefront or should the Department of Health and Human Services (HHS) play the leading role? If DHS is in charge, how will they draw on public health expertise and resources to guide the Federal response?

The same question frequently arises when setting up an incident command at the local level for a biological incident. Is the public health officer the incident commander? The answer is sometimes yes, sometimes no. The answer depends on the health department, it depends on the community and it depends on the event. The decision should be made based on a clear understanding of needs and capabilities. Most often at the local level, the understanding is that if public health is not the incident commander in a public health emergency, whoever does assume that role will rely heavily on the public health officer to provide the guidance and situational awareness necessary for decision-making.

Thus far, the Department of Homeland Security has made progress in understanding and integrating public health in fits and starts. Initial efforts toward fulfilling HSPD–8 showed limited understanding of what public health even was and how it would mount a response in an incident. As I described above, pandemic influenza response will require much more than medical care and hospital beds. To its credit, DHS later reached out to public health practitioners for input on documents like the Universal Task List and the National Preparedness Goal. DHS and HHS appear to have improved their communication somewhat, but there is still much room for improved coordination between these two agencies.

For example, the interdisciplinary cooperation I have described that will be so valuable in the event pandemic influenza arrives in Anne Arundel County appears not to be a high priority in the current Federal approach. Congress has appropriated some much-needed additional funds, $350 million, for local and state health departments, and new guidance for those efforts is on its way. Yet, little discussion is taking place regarding the non-CDC grantees vital to the success of a pandemic influenza plan. Can DHS grantees use their funds for collaboration on this sort of planning? Should they be required to do so?

Federal agencies need to collaborate at the highest level of government to send coordinated and reinforcing messages to all grantees at state and local levels that multidisciplinary cooperation is a high priority. Through the structure of grant programs and the guidance provided, DHS and HHS can either facilitate local efforts

in that regard or hinder them with inconsistent guidance. Both agencies should include local public health practitioners, the ones who will be key responders on the ground, in their consultations. It is not enough for DHS to rely exclusively on HHS for public health input.

Another way that those at the Federal level can help to make our national response to emergencies like pandemic influenza more unified is to remember the professional diversity of their audience when rolling out national programs. Local emergency response agencies are being required to absorb and integrate a continual stream of new initiatives, ranging from NIMS and the National Response Plan to the Target Capabilities and the National Preparedness Goal. Training courses are introduced through FEMA and the Emergency Management Institute. Yet the local audiences grappling with all these new programs—while continuing their day-to-day workload serving their communities—need to understand just how these programs are relevant to their roles in an emergency. When a federal contractor with a fire service background conducts a basic Incident Command System training for public health workers, the concepts are correct, but the anecdotal examples don't resonate. In terms of public health, there are a wealth of solid examples of departments that have integrated ICS into even their day-to-day operations. Courses that reference those familiar experiences are more likely to have an impact. Unfortunately, such courses are hard to find.

Finally, while much time is spent asking local and state emergency personnel to understand how the national plan is structured, we need to remember that no matter how serious the emergency, the response always begins locally. And in the case of pandemic influenza, the effectiveness of that early response will determine how the emergency unfolds. Standardization is important to the extent that it can be realized, but national plans also must support a response in every corner of this diverse country. A one-size-fits-all approach simply will not be successful.

Whether pandemic influenza or some other disaster afflicts our nation, there is no shortage of dedicated Americans at every level of government working hard on homeland security. Continuing to promote, support, and build local partnerships among public health, health care, public safety, emergency management, and a host of private sector partners will only improve our ability to protect the health and safety of our communities.

Mr. LINDER. Thank you very much, Ms. Phillips.

Mr. Blackwelder?

ERNEST BLACKWELDER, SENIOR VICE PRESIDENT, BUSINESS FORCE, BUSINESS EXECUTIVES FOR NATIONAL SECURITY

Mr. BLACKWELDER. Good afternoon, Chairman Linder, Chairman Reichert, ranking members, distinguished members of the committee. It is an honor to be here today to address some of the ways in which the private sector can help our country better prepare for and respond to pandemic influenza.

I am here on behalf of Business Executives for National Security, or BENS, a national nonpartisan, nonprofit organization, comprised of more than 500 business executives committed to volunteering their time and talents to improve the nation's security.

Mr. Chairman, when facing the threat of pandemic flu or any catastrophic event, businesses have two kinds of responsibilities. First is saving themselves, and the second is helping their communities. Self-preservation or business continuity planning includes developing emergency response capabilities to protect employee health and safety, as well as taking steps to make business operations resilient enough to survive a catastrophic event. Business preparedness helps protect critical infrastructure, ensure availability of urgently needed goods and services, and strengthen economic stability.

Businesses are creating contingency plans to help reduce their economic risk in the event of pandemic flu, including stockpiling supplies, improving virtual work programs such as telecommuting,

implementing travel restrictions, cross-training employees, reallocating work activities, and reconfiguring shifts, to limit exposure to coworkers.

While business continuity planning is critical, there remain huge gaps in our preparedness and response capabilities nationwide that neither business nor government can fill alone. Increasingly, communities recognize the need to bring the best of business and government together to meet these challenges. Three years ago, BENS began to leverage private sector resources and know-how to work in concert with state and local government to strengthen regional homeland security and disaster response capability. I would like to share some of the lessons we have learned and the promise they hold for saving lives.

Through regional public-private partnerships we call the Business Force, BENS has mobilized businesses to help state and local government on a pro bono basis to prepare for and respond to catastrophic events.

Mr. Chairman, I would like to describe four Business Force initiatives that illustrate the potential for American businesses to work in partnership with government, specifically to address the threat of pandemic flu.

The first involves mobilizing business volunteers to assist in the dispensing of the strategic national stockpile. In July of last year, BENS worked in partnership with state and local public health leaders in Georgia and the metro Atlanta region to mobilize 1,200 private sector volunteers for a live bioterrorism exercise. Our members facilitated a 9-month design effort, during which business volunteers helped state and local health officials modify their existing exercise plans to incorporate significant business participation. That exercise included utilizing corporate facilities as a point of dispensing, or POD.

Following the exercise, BENS members worked with state and local public health leaders to create a model that calls for large employers in a given urban area to dispense vaccines or medications to their employees and their families, with the understanding that a predefined group of employees would then volunteer to go to designated public schools and help treat the general population. This model has the potential to provide a substantial portion of the thousands of volunteers that would be needed in any major urban area in the wake of a biological or chemical attack.

Furthermore, this model can be modified for use in an influenza pandemic by tapping the expertise of the private sector in such areas as logistics, supply chain management, human resources, and in fact creating a public-private sector disease management and monitoring program.

The second initiative is what we call the Business Response Network, Web-based regional databases of pledged business resources that state and local emergency management leaders and public health officials can call upon during a catastrophe. Both 9/11 and Hurricane Katrina highlighted the need to create in advance a system that effectively utilized the overwhelming offers of support from the private sector. The total value of business resources we have registered to date is about $700 million, but the potential ex-

ists to register tens of billions of dollars in pledged business resources nationwide.

Now, some of the search capacity requirements of the pandemic, including facilities, transportation, and communications equipment, can be identified and pre-pledged, while other needed supplies might be solicited on the fly during an event. The Business Response Network is an efficient and effective tool for doing both.

The third initiative is the Workplace Sentinel Program. BENS has recently partnered with the New Jersey Public Health Department to design a Web-based reporting system that will enable large employers to report spikes in absenteeism to state and local epidemiologists.

Finally, in addition to building these three specific capabilities, business and government leaders must learn to communicate effectively and make sound decisions during an event. To this end, BENS is facilitating the integration of business representatives into state and local emergency operation centers and intelligence and information fusion centers.

Mr. Chairman, business does not have all the answers, but it is clear, especially during times of crisis, that our nation needs the vast resources, expertise and capabilities of the private sector. We cannot overstate the value of building trust and creating a study bridge between business and government in advance. BENS will continue to work with our government partners to strengthen prevention, preparedness and response capabilities.

Mr. Chairman and members of the committee, thank you for your courtesies. I look forward to your questions.

[The statement of Mr. Blackwelder follows:]

PREPARED STATEMENT OF ERNEST A. BLACKWELDER

Good afternoon, Chairman Linder, Chairman Reichert, Ranking Members, and distinguished Members of the Committee. It is an honor to appear before you today, to address some of the ways in which business and the private sector can help our country better prepare for and respond to the threat of a pandemic influenza.

My name is Ern Blackwelder. I am here on behalf of Business Executives for National Security (BENS)—a national, non-partisan, non-profit organization comprised of more than 500 business executives—committed to volunteering their time and talents to improve the nation's security.

Since its inception in 1982, BENS has worked on nuclear non-proliferation initiatives and the application of best business practices into Pentagon support functions. With the turn of the century, BENS' focus expanded to include the growing threats of terrorism. After 9–11, our members agreed there would be important roles for the private sector in homeland security as well and quickly recognized the wisdom of an all hazards approach.

When facing the threat of pandemic flu, or any catastrophic event, the business community has responsibility in two important areas.

The first is business continuity planning—a term that often includes developing emergency response capabilities to help ensure employee health and safety, as well as making sure that the business survives a catastrophic event. Business preparedness also serves to protect critical infrastructure, ensure availability of urgently needed goods and services, and strengthen economic stability. These challenges would be especially severe in a flu pandemic, where companies could experience absenteeism rates of up to 30 or 40 percent for up to several months.

Pandemic flu business continuity plans encompass a wide variety of activities like hand washing and social distancing, stockpiling supplies, monitoring and assisting the sick, improving virtual work programs such as telecommuting, implementing necessary travel restrictions, cross-training employees, reallocating work activities and reconfiguring shifts to limit disease spread. Large companies typically employ business continuity professionals, while smaller companies often ask operations managers to perform this function along with their other responsibilities.

In December 2005, HHS Secretary Leavitt and DHS Secretary Chertoff co-signed a letter to business leaders containing a checklist to assist companies with pandemic flu business continuity planning (*www.pandemicflu.gov* and *www.cdc.gov/business*). In addition to advising businesses on how to prepare themselves for a pandemic, the Secretaries asked businesses to coordinate with external organizations to help their communities. I will focus the remainder of my prepared remarks on this second responsibility of business during times of crisis: that of providing civic leadership—sharing resources and expertise for the benefit of the community and the nation.

While business continuity planning is critical, there are huge gaps in our preparedness and response capabilities nationwide that neither business, nor government can fill alone. We saw those gaps on 9–11, and more recently with Hurricane Katrina. Increasingly, communities recognize the need to bring the best of business and government together to meet these challenges.

Three years ago, BENS began to leverage private sector resources and know-how to work in concert with state and local government to strengthen regional homeland security and disaster response capability. I'd like to share some of the lessons we've learned and the promise they hold for saving lives.

Through regional public private partnerships we call the Business Force, BENS has mobilized member businesses on a pro bono basis to help state and local government leaders prevent, prepare for, and respond to catastrophic events—including acts of terrorism, natural disasters, or public health emergencies. These partnerships can help reduce loss of life and economic disruption from such events by implementing specific preparedness and response initiatives that tap the expertise and resources of the private sector and build trust between business and government.

Through early collaboration with state and local public health leaders and with the Center for Disease Control (CDC) in Atlanta, we've identified four Business Force initiatives of particular value in addressing the threat of a flu pandemic, or other public health emergencies. They include:

1) mobilizing business volunteers to assist in the dispensing of the Strategic National Stockpile;

2) building Business Response Networks—web-based registries of pledged business resources that can be called upon by public officials in response to a catastrophic event or public health crisis;

3) launching the Workplace Sentinel program—enlisting large employers to report anomalous rates of employee absenteeism to provide public health officials early indicators of disease; and

4) integrating business into state and local emergency operations and intelligence fusion centers.

Strategic National Stockpile (SNS) Dispensing

BENS worked in partnership with state and local public health leaders in Georgia and the Metro-Atlanta region to mobilize 1,200 private sector volunteers for a live bio-terrorism exercise in July 2005. Our members facilitated a nine-month design effort, during which business volunteers helped state and local public health officials modify their exercise plans to incorporate significant business participation. During the exercise, business volunteers served as both patients and logistics observers at three dispensing sites—two public schools and a private manufacturing facility.

The Atlanta exercise illustrated that local public health districts, responsible for dispensing the SNS, used approximately 40 percent of their personnel to process a patient volume equal to less than five percent of the patient volume expected following an actual airborne anthrax attack. In other words, had this been an actual attack, public health would have had about 10 percent of needed personnel. Similar shortfalls exist under other biological or chemical attack scenarios, although specific personnel requirements would vary.

Following the exercise, BENS worked with state and local public health leaders to create a model that calls for large employers in a given urban area to dispense vaccines or medications to their employees and families, with the understanding that a pre-defined group of employees would then volunteer to go to designated public schools to assist in dispensing to the general public.

This model has the potential to provide a substantial portion of the thousands of volunteers that would be needed in any urban area in the wake of biological or chemical attack. Furthermore, this model can be modified for use in an influenza pandemic by tapping the expertise of BENS members and staff—in areas such as logistics, volunteer recruitment, and building trust between business and government partners—to create a public-private disease monitoring and management program.

Beyond Georgia, public health leaders have expressed interest in implementing this model in each of the regions where BENS has operations—including the states

of California, Kansas, Missouri and New Jersey, and the Kansas City and Santa Clara County urban areas selected for emergency preparedness pilots by the Centers for Disease Control and Prevention (CDC).

Business Response Network (BRN)

Hurricane Katrina demonstrated how a catastrophic event can overwhelm government's ability to respond. Katrina also highlighted the need to create, *in advance,* a system for effectively utilizing the overwhelming offers of support from the private sector. BENS has implemented a web-based system to meet this need called the Business Response Network, or BRN. The BRN is a regional web database of pledged business resources (warehouse or office space, trucks, equipment, skilled personnel, etc.) that emergency management and public health leaders can call upon in a catastrophe or public health emergency. (*www.businessresponsenetwork.org*)

BENS has implemented permanent BRN's in New Jersey, Missouri and Kansas, and a temporary BRN for the state of Massachusetts prior to the 2004 Democratic National Convention. The total value of business resources registered to date is approximately $700 million; however, the potential exists to register tens of billions of dollars in pledged business resources nationwide. Multiple state BRN's could be coordinated through the states' mutual aid program known as EMAC (Emergency Management Assistance Compact). The EMAC system currently applies to public sector resources, however BENS is exploring opportunities to include private sector resources as well.

BENS builds the BRN at the state or regional level for two reasons: 1) state and local governments have primary accountability for first response under the National Response Plan; and 2) it is easier to build trust between business and government at the state and local level.

Until there is a uniform federal standard, concerns about liability protection must be addressed at the state and local level, where laws vary widely. While some businesses may not participate in their state's BRN due to liability concerns, many others have chosen to participate—even with imperfect Good Samaritan laws. These companies recognize that sitting on the sidelines will only lead to higher casualties and greater risk—to the economy, their communities, and their businesses.

The BRN system applies to "all hazards", but would be especially useful in the event of a pandemic, given its potential scope and duration. Some of the surge capacity requirements of a pandemic—including facilities, transportation, or communications equipment—can be identified and pre-pledged, while other needed supplies might be solicited on-the-fly during an event. The BRN provides an efficient and effective tool for doing both.

Workplace Sentinel

BENS has recently partnered with New Jersey public health leaders to design a web-based reporting system that will enable large employers to report spikes in absenteeism that can alert state epidemiologists. This system, which is planned for implementation in mid-2006, calls for each company to establish a baseline absenteeism rate. When absenteeism exceeds a certain number of standard deviations above baseline, companies will report that information online. Employer data will be anonymously aggregated by county, and then forwarded to state and affected county public health agencies to help identify causes and determine appropriate response.

Business Integration into Emergency Operations and Information Fusion Centers

The SNS Dispensing, BRN and Workplace Sentinel initiatives can all be implemented and exercised in advance, to dramatically improve the response to any catastrophic event or public health emergency. In addition to building these specific capabilities, business and government leaders must learn to communicate effectively and make sound decisions during a crisis. To this end, BENS is facilitating the integration of business representatives into state and local Emergency Operations Centers and Intelligence/Information Fusion Centers.

Establishing a formal business presence at these centers and performing exercises to test the effectiveness of business-government communication will strengthen teamwork and build trust—making it easier to work together effectively during a crisis. BENS is developing pilot programs in Georgia, Metro Kansas City, New Jersey, and in Los Angeles and Orange Counties, and has also been asked to support implementation of similar initiatives in other states.

Mr. Chairman, there is no single model, nor comprehensive program that will fill all the nation's needs in the event of pandemic flu. It is clear, however, that especially during times of crisis, our nation needs the vast resources, expertise, and capabilities of the private sector. BENS is highly confident in the value of building trust and creating a sturdy bridge between business and government, and we will

continue to work with our government partners to strengthen prevention, preparedness and response capabilities.

Mr. Chairman, I look forward to answering your questions.

BENS
BUSINESS FORCE
Business Executives for National Security
Programs and Regions

Initiative	*Description*	*NJ*	*GA*	*KC*	*SF*	*LA*	*MA*
ASSETS							
Business Response Network	* Businesses make needed resources (e.g., trucks, warehouses, people with certain skills) available on a pro bono basis via web database	X	X	X	X	X	X
VOLUNTEERS							
Strategic National Stockpile Partnership	* Businesses assist in distribution and dispensing of vaccines and other medical supplies in a major medical emergency	X	X	X	X	X	
Emergency Preparedness Training	* BENS recruits companies to create Community Emergency Response Teams (CERTs)	X		X			
INFORMATION							
Intelligence/ Information Fusion	* Business assist government in implementation of Fusion Centers that include active participation of the private sector	X	X	X	X	X	
Critical Infrastructure Protection	* Business assists government in implementing critical infrastructure risk assessment tools, and provide advise on protecting critical infrastructure		X	X		X	
Public TV/Radio Partnership	* BENS recruits companies to receive satellite ''datacasting'' feeds during times of crisis	X					
Knowledge Portal	* BENS creates a ''knowledge management portal'' to facilitate sharing of best practices between state government and business		X	X			
Agricultural Early Warning System	* Agricultural businesses report animal sickness or contamination to public health agencies (early stage)		X	X			

BENS—Continued
BUSINESS FORCE
Business Executives for National Security
Programs and Regions

Initiative	*Description*	*NJ*	*GA*	*KC*	*SF*	*LA*	*MA*
STRATEGIC SUPPORT							
Exercises	* BENS designs and conducts exercises to identify program opportunities and to ensure that each program is operational. Also hosting a major TOPOFF3 exercise in New Jersey.	X	X	X	X		
.							
Ad Hoc Projects	* Operating Groups of senior business and government leaders in each region enable collaboration on an as-needed basis (e.g., response to flu vaccine shortage; serving on state homeland security committees)	X	X	X	X		

Regions
NJ: New Jersey—started February 2003
GA: Georgia—started October 2003
KC: MidAmerica (Missouri, Kansas, Nebraska, Iowa, based Kansas City)—started October 2004
LA: Los Angeles and Orange Counties—management agreement Homeland Security Advisory Council began January 2006
SF: San Francisco Bay Area—start-up planned for 2005
MA: Massachusetts—DHS project for Democratic National Convention in 2004

Mr. LINDER. Thank you, Mr. Blackwelder.

Dr. Seaberg?

Dr. SEABERG. Mr. Chairman and members of the subcommittees, I want to thank you for allowing me to testify today on behalf of the American College of Emergency Physicians. ACEP is the largest specialty organization in emergency medicine, with over 23,000 members.

Emergency departments act as our nation's health care safety net. Unlike any other health care provider, the emergency department is open for all patients who seek care, 24 hours a day, 7 days a week, 365 days a year. We provide care to anyone who comes through our doors regardless of their ability to pay.

At the same time, when factors force an emergency department to close, it is closed to everyone and the community is denied a vital resource. As the frontline of emergency care in this country, emergency physicians are particularly sensitive to the devastating impact an avian flu pandemic would have on our patients and our communities. According to CDC estimates, a medium-level pandemic in the U.S. could affect between 13 percent and 35 percent of the population, with an economic impact between $71 billion and $166 billion.

As I mention in my written statement, avian influenza could proliferate rapidly throughout the United States. As the virus spreads exponentially from person to person, the strain will cripple our na-

tion's emergency departments, which are already operating at or over critical capacity.

Over the last decade, emergency department visits have risen by 26 percent. However, the number of emergency departments have decreased by 14 percent. Additionally, hospitals have lost over 103,000 staff beds and 7,800 intensive care unit beds. As a result, fewer beds are available for admissions from the emergency department. Once the emergency departments have filled all their beds, there is no reasonable way to expect that the stressed systems will be able to suddenly create the surge capacity necessary to effectively manage an event.

When crowding becomes so severe, ambulances must be diverted to other hospitals, reducing patient safety. In a study that was just released on Monday, an ambulance is diverted to a different hospital on average every minute in the United States. These findings show a clear lack of capacity in the emergency medical care system.

Protection of a disaster, act of terrorism or epidemic will only be effective if appropriate preparations have been made at all levels. In most disasters, the emergency department is the frontline. History has shown that during a disaster, nearly 80 percent of patients simply go to the nearest emergency department, bypassing ambulance transport. Even if hospitals had sufficient warning of a pandemic outbreak, most emergency departments have limited isolation units. Once the emergency physicians and nurses have contracted the disease, their ability to provide care for their patients would be severely diminished.

Since 9/11, we have appropriately spent billions on preparedness, but emergency departments have received virtually none of that support. Lack of overall capacity may lead to a breakdown of the health care safety net when we need it most. If we are unable to effectively respond to a disaster or pandemic, people will suffer needlessly and some will die. We must take steps now to avoid a catastrophic failure of our medical infrastructure, and we must take steps now to create capacity, alleviate overcrowding, and improve surge capacity in our nation's emergency departments.

We present this 10-point plan to achieve these goals. One, we must increase the surge capacity of our nation's emergency departments by ending the practice of boarding admitted patients in emergency departments because no in-patient beds are available.

Two, we must collect and monitor real-time data for syndromic surveillance, hospital and emergency department capacities, and ambulance diversion status.

Three, homeland security agencies need to understand that emergency departments are part of the community's critical infrastructure.

Four, we must require hospitals and communities that are severely affected by a disaster to postpone elective admissions until the crisis has abated.

Five, command and control of disaster medical response must be more coordinated across federal, state and local agencies.

Six, we must develop and refine national medical preparedness priorities and standards that are consensus-driven and evidence-based.

Seven, we must provide federal and state funding to compensate hospitals and emergency departments for the unreimbursed cost of meeting the critical public health and safety net roles, to ensure that emergency departments remain open.

Eight, we must establish a sustainable funding mechanism for disaster preparedness for hospitals, emergency departments, and emergency management that is tied to national benchmarks and deliverables.

Nine, Congress should continue to include emergency physicians and nurses in any definition regarding first responders to disaster.

And ten, Congress should pass H.R. 3875, the Access to Emergency Medical Services Act, which provides incentives to hospitals to reduce overcrowding and provides reimbursement and liability protection for EMTALA-related care.

Let me close by assuring you that in any local, regional or national disaster epidemic, the nation's emergency physicians and emergency nurses will be there to do their jobs, as was evident during Hurricane Katrina. Every day, we save lives across America. Please give us the capacity and the tools we need to be there for you when you need us, today, tomorrow and when the next major disaster strikes the citizens of this great country.

Thank you.

[The statement of Dr. Seaberg follows:]

PREPARED STATEMENT OF DAVID C. SEABERG, M.D., C.P.E., F.A.C.E.P.

Introduction

Mr. Chairmen and members of the subcommittees, I want to thank you for allowing me to testify today on behalf of the American College of Emergency Physicians at this joint hearing entitled, "Protecting the Homeland: Fighting Pandemic Flu From the Front Lines."

ACEP is the largest specialty organization in emergency medicine, with over 23,000 members who are committed to improving the quality of emergency care through continuing education, research, and public education. ACEP has 53 chapters representing each state, as well as Puerto Rico and the District of Columbia, and a Government Services Chapter representing emergency physicians employed by military branches and other government agencies.

Emergency departments act as our nation's health care safety net. Unlike any other health care provider, the emergency department is open for all patients who seek care, 24 hours a day, 7 days a week, 365 days a year. We provide care to anyone who comes through our doors, regardless of their ability to pay. At the same time, when factors force an emergency department to close, it is closed to everyone and the community is denied a vital resource.

As the frontline of emergency care in this country, emergency physicians are particularly sensitive to the devastating impact an avian flu pandemic would have on our patients and our communities. To put this in perspective, I would like to share with you the findings of the Centers for Disease Control and Prevention:

> "In the absence of any control measures (vaccination or drugs), it has been estimated that in the United States a 'medium-level' pandemic could cause 89,000 to 207,000 deaths, 314,000 to 734,000 hospitalizations, 18 to 24 million outpatient visits, and another 20 to 47 million people being sick. Between 15% and 35% of the U.S. population could be affected by an influenza pandemic, and the economic impact could range between $71.3 and $166.5 billion."[1]

As this statement indicates, if the avian flu pandemic, which has been the focus of world attention over the past several months, should begin spreading from human to human and then reach our shores, the consequences to the United States would be catastrophic. What makes a potential avian influenza pandemic so deadly is that, like some biologic agents, it would be transmissible from person to person and could spread rapidly in an urban environment or through mass transportation. Optimally, treatment must be initiated as quickly as possible, although contracting

[1] Centers for Disease Control and Prevention. January 17, 2006 "Pandemic Flu: Key Facts"

avian flu would not result in obvious characteristics that would distinguish it from the normal flu initially. Therefore, detecting it, even when symptoms occur may be difficult.

The state of readiness in our nation's emergency departments and the ramifications of patients who have been infected with the avian flu virus appearing at hospital emergency departments around the country are what I will explore in my testimony today.

Patient X

Let me give you an example of what could be a typical avian influenza outbreak scenario. Patient X unknowingly contracts the avian flu while on a business trip in Europe immediately prior to boarding a plane for Atlanta. Not only will this person infect the passengers of this plane and anyone else who comes into contact with this individual at one of the busiest airports in the world, but the passengers who have final destinations outside Atlanta will also carry the infection to other passengers, and so on, as the disease begins to spread exponentially. Of course, it will take several days for this person to feel sick enough that they go to their local emergency department.

This infected patient now sits in a typically overcrowded emergency department spreading the infection to everyone else in the waiting room and they, in turn, will either eventually be admitted to the hospital or treated and released to go home and spread the infection to their family and neighbors. Even once they are admitted to the hospital, the majority of patients still remain in the emergency department (also known as "boarding" a patient in the emergency department) waiting for an inpatient bed for more than four hours, with nearly 20 percent of those patients waiting in the emergency department for more than eight hours,[2] which would continue to expose these infected individuals to other emergency department patients, as well as patients throughout the hospital due to the high-volume of air recirculation.

While it is common practice to ensure a patient who enters the emergency department with a cough or fever wears a mask while waiting to be treated, it may take over an hour before a triage nurse has an opportunity to see that individual if the emergency department just received multiple ambulances and the waiting room is already saturated. In addition, the patient may require oxygen treatment and a nebulizer, making the use of a mask irrelevant, and it was the use of nebulizers that caused SARS to spread so rapidly through emergency rooms in 2003.

Without sufficient warning, emergency physicians and nurses would be unprepared to place arriving avian flu patients in isolation until it was too late. Since most hospitals only have one isolation unit, there would be no way to isolate the next patient infected with avian flu. By this time, the emergency physicians and nurses have also been in contact with avian flu and, unless they have been previously inoculated, would be at high-risk of contracting the disease themselves, potentially diminishing their ability to provide care for incoming patients.

Overcrowding and Lack of Surge Capacity

As the disease begins to spread rapidly among the population, the strain will cripple America's 4,000 hospital emergency departments as the majority of the nation's emergency departments are already operating either at or over critical capacity. Emergency department visits rose more than 26 percent in a decade—from 89.8 million in 1992 to 114 million in 2003. At the same time, the number of emergency departments decreased by 14 percent.[3] In addition, between 1990 and 1999, hospitals lost 103,000 staffed, inpatient medical/surgical beds and 7,800 Intensive Care Unit (ICU) beds.[4] As a result, fewer beds are available for admissions from the emergency department. Once the emergency departments have filled all of their beds, there is no reasonable way to expect that these stressed systems will be able to suddenly create the surge capacity necessary to effectively manage a pandemic, natural disaster, terrorist attack or other mass-casualty event.

When crowding becomes so severe that patient safety could be jeopardized, ambulances must be diverted to other hospitals, potentially causing precious time to be lost. In 2001, two-thirds of emergency departments diverted ambulances to other hospitals. Because overcrowding is most severe in areas with large populations (where the potential spread of infectious disease poses the greatest risk), nearly one

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[2] General Accounting Office. GAO–03–460. March, 2003 "Hospital Emergency Departments: Crowded Conditions Vary among Hospitals and Communities."

[3] Centers for Disease Control and Prevention Advance Data from Vital and Health Statistics "National Hospital Ambulatory Medical Care Survey: 2003 Emergency Department Summary." No 358. May 26, 2005.

[4] "Emergency Departments: An Essential Access Point to Care," *AHA Trendwatch* 3, no. 1 (2001): 1–8.

in 10 hospitals reported being on ambulance diversion 20 percent of the time (more than four hours per day).[5]

Need for Effective Syndromic Surveillance

Knowing about an avian flu outbreak elsewhere in the world or here in the United States could significantly improve preparations and reduce diagnosis time. For this reason, it is essential that our nation have a real-time syndromic surveillance system linking emergency departments across regions with state public health departments and nationally with the Centers for Disease Control and Prevention to serve as an early warning system for epidemics. Existing data collection systems are currently limited in their capacity and ability to provide information to health authorities and the public. Until such time that we do have an effective means of data collection and dissemination, emergency physicians and nurses will serve as critical components of the nation's human syndromic surveillance system.

Planning and Preparedness

Detection of a disaster, act of terrorism or epidemic will only be effective if appropriate preparations have been made at all levels of government and the private sector. In most disasters, the emergency department is the frontline. History has shown that during a disaster, such as 9/11 or the anthrax scare here in the nation's capital, nearly 80% of patients simply go to the nearest emergency department, bypassing ambulance transport. In fact, only a small percentage of patients are actually managed by EMS. Emergency department personnel are the forgotten first line of response in disasters.

Since 9/11 we have appropriately spent billions on preparedness. But emergency departments have received virtually none of that support. Policymakers and the public have assumed that the nation's emergency departments will be able to meet their vital safety net function. However, lack of overall capacity may lead to a breakdown of the health care safety net when we need it most. If we are unable to effectively respond to a disaster or pandemic, people will suffer needlessly and some will die.

The private sector also will play an important role before and during an avian flu pandemic. In addition to providing goods and services to the public and medical personnel, workplace policies that diminish the potential spread of infectious diseases are critical. Establishing an ethic of infection control in the workplace that includes options for working offsite while ill, systems to reduce infection transmission and worker education are vital.

ACEP Recommendations

We must take steps now to avoid a catastrophic failure of our medical infrastructure and we must take steps now to create capacity, alleviate overcrowding and improve surge capacity in our nation's emergency departments.

My colleagues and I at the American College of Emergency Physicians present this 10-point plan to achieve these goals and we urge Congress to enact these measures in order to effectively manage a pandemic, natural disaster, terrorist attack or other mass-casualty event.

1. We must increase the surge capacity of our nation's emergency departments by ending the practice of "boarding" admitted patients in emergency departments because no inpatient beds are available. This will require changing the way hospitals are funded to allow for inpatient and intensive care unit surge capacity to manage this burden.
2. We must implement protocols to collect and monitor real-time data for syndromic surveillance, hospital inpatient and emergency department capacities and ambulance diversion status. Collection of this data is vital to developing appropriate protocols.
3. Homeland Security agencies on the Federal, State, and Local levels need to understand that hospitals and Emergency Departments are part of the community's Critical Infrastructure. We can not have response and recovery in a disaster without fully functioning, protected, and connected health resources.
4. We must require hospitals and communities that are severely affected by a natural or man-made disaster, or even a severe influenza outbreak, to postpone elective admissions until the crisis has abated. We must develop a way to compensate those facilities for their loss of revenue.
5. Command and control of disaster medical response must be more coordinated across federal, state and local agencies and departments.

[5] General Accounting Office. GAO–03–460. March, 2003 "Hospital Emergency Departments: Crowded Conditions Vary among Hospitals and Communities."

6. We must establish a committee of stakeholders and disaster medicine experts from the public- and private-sectors and academic institutions to develop and/or refine national medical preparedness priorities and standards. We must change the national preparedness culture to one which is consensus-driven and evidence-based.
7. We must provide federal and state funding to compensate hospitals and emergency departments for the unreimbursed cost of meeting their critical public health and safety-net roles to ensure these emergency departments remain open and available to provide care in their communities.
8. We must establish a sustainable funding mechanism for disaster preparedness for hospitals, emergency departments and emergency management that is tied to national benchmarks and deliverables.
9. To ensure emergency physicians and nurses play a primary role in disaster planning and are considered in any national allocation of resources and protective measures, Congress should continue to include them in any definitions regarding first responders to disasters, acts of terrorism and epidemics.
10. Congress should pass H.R. 3875, the "Access to Emergency Medical Services Act," which provides incentives to hospitals to reduce overcrowding and provides reimbursement and liability protection for EMTALA-related care.

Conclusion

While adopting crisis measures to increase emergency department capacity may provide a short-term solution to a surge of patients suffering from the flu, ultimately we need long-term answers. The federal government must take measures necessary to strengthen our resources and prevent more emergency departments from being permanently closed. In the last ten years, the number and age of Americans has increased significantly. During that same time, while visits to the emergency department have risen by tens of millions, the number of emergency departments and staffed inpatient hospital beds in the nation has decreased substantially.[6] This trend is simply not prudent public policy, nor is it in the best interest of the American public.

Let me close by assuring you that in any local, regional or national disaster or epidemic, the nation's emergency physicians and emergency nurses will be there to do their jobs, as was evident during Hurricane Katrina. If the avian flu pandemic were to spread throughout America before appropriate safety measures could be implemented, then it's reasonable to expect a 20% loss of emergency department personnel due to death or disability. America's emergency departments are already operating at or over capacity. This loss of emergency department personnel is unsustainable and would cripple this nation's health care safety net and the quality of patient care would be severely jeopardized.

Every day we save lives across America. Please give us the capacity and the tools we need to be there for you when you need us. . . today, tomorrow and when the next major disaster strikes the citizens of this great country.

Mr. LINDER. Thank you, Dr. Seaberg.

I want to thank each of you for your hopeful and uplifting comments.

Dr. Seaberg, do the emergency rooms have paperless activities so that they can be on computer and let that information go immediately to the Board of Health or something when you see a spike?

Dr. SEABERG. There are very few emergency departments right now that are on paperless systems, probably less than 10 percent in the country right now. None of those systems that I am aware of are right now hooked up to the health department. There are some states that are looking at developing this, but currently there are very few paperless systems across the country.

Mr. LINDER. Dr. O'Toole, is that what we need?

Dr. O'TOOLE. Yes.

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[6] Centers for Disease Control and Prevention Advance Data from Vital and Health Statistics "National Hospital Ambulatory Medical Care Survey: 2003 Emergency Department Summary." No 358. May 26, 2005.

"Emergency Departments: An Essential Access Point to Care," *AHA Trendwatch* 3, no. 1 (2001): 1–8

Mr. LINDER. I understand Pennsylvania is working toward that, in testimony we had, I believe, yesterday.

Dr. O'TOOLE. Yes, some hospitals, about 15 percent of hospitals have electronic records in one way or another. Many of them are not as robust as one would wish, and very, very few of them have links to public health. As we spend money, we ought to try and invest in solutions instead of stopgaps wherever possible.

Much better than surveillance systems designed for this disease or that disease, or this problem and that problem, would be a true integrated electronic health network to take care of patients on a routine day, but would also give you real-time situational statistics during an epidemic. That is going to be a ways off.

Mr. LINDER. Secretary Mitchell, who has the authority to instigate quarantines in Delaware?

Mr. MITCHELL. As the point person, I have the overall command of an emergency such as what we are discussing.

Mr. LINDER. That rests with you?

Mr. MITCHELL. Yes, it does rest with me. However, we would petition the court in cases where we could. That is not where we are that concerned. We are concerned where someone comes in to an emergency room, and heaven forbid, and there are many undocumented workers here, as you know. If they are diagnosed with bird flu and told that they are going to have to be quarantined, they are probably going to leave the hospital immediately and they are probably going to disappear.

Which brings up the case, it is almost like an arrest-without-warrant situation. When can a police officer detain without a judicial order? We can, in Delaware, provided that a physician, based on clear and convincing evidence, says that that patient in fact is infected and is a danger to the health of our community. Based on that clear and convincing evidence, a police officer can detain against one's will.

Mr. LINDER. Ms. Phillips, do you have that same power?

Ms. PHILLIPS. We have a slightly different arrangement in the state of Maryland. Two years ago, the legislature enacted the Catastrophic Health Emergency Powers. The power to quarantine and isolate individuals rests with the governor, who may designate that authority to the state health secretary to issue the quarantine and isolation orders. It is the role of the local health department to carry out those orders, to find suitable arrangements for these individuals, and to provide the support necessary for their term of either isolation or quarantine.

Mr. LINDER. I am impressed by the training that you do with your 800 people. Most of us think of local health departments as being sort of sleepy backwaters. Is it your experience that many counties across the country are doing what you are doing?

Ms. PHILLIPS. It is. From my work nationally with NACCHO, I am seeing that there is a tremendous infusion of an understanding of NIMS, incident command, and the kinds of infrastructure that we take for granted on the public safety side, to the public health community. The kinds of opportunities for a clear chain of command and accountability during in an emergency are clearly advantages that the public health community is picking up, as well as the 24/7 response.

What we do not share with the public safety folks is three shifts. Public health typically is a one-shift-a-day operation so that we are drawing on a workforce that in a sustained emergency would be very stretched.

Mr. LINDER. Dr. O'Toole, I do not want to sound like a cliche, but is it true that this is not a matter of if, it is a matter of when?

Dr. O'TOOLE. There is no scientific way to answer that. I am very worried. I think it would be the height of irresponsibility to bet on a miracle. In 1918, the mortality rate was 1 to 2 percent. We are seeing a mortality rate of about 50 percent right now. Even if it drops down to half that, and there is no reason to suppose it would, we are talking about quite a cataclysmic event.

If I could, I would like to say a couple of things about quarantine. "Quarantine" should be banned from use as a word because it is a very confusing word. It comes from the 1400s. It had to do with taking ships that you thought were coming from plague-infested waters and putting them in a corner of the harbor until everybody on the ship was either dead or still living, until they were not contagious. I do not think, aside from that special situation of possibly seeing the first village that gets transmissible flu, I do not think it is possible to implement a quarantine in the modern world.

Secondly, I do not think you are going to want to, if what you are going to do is take people who may have been exposed, but are not yet sick, and house them together until they are through the incubation period. The way to think about disease containment is as a return on investment judgment. Even if you could quarantine Annapolis, where I live by the way, would you really want to? Is that how you are going to want to be spending your resources in an epidemic? Probably not.

Sam Nunn said something very wise during a bioterrorism exercise years ago, when he was being urged to federalize the National Guard. He said, there is no force on earth that can make the American people do something they do not believe is in their own best interest and the best interest of their families. It is very important to keep that in mind. If this breaks out, we are not going to have time to use video to go through due process and so forth. We are going to have one out of four Americans infected. It is going to be overwhelming.

The other thing that I would mention is a recent Harvard study that shows that in surveys, Americans are much more willing to be isolated at home or in the type of facility Ms. Phillips talked about, if they cannot stay at home, if it is not compulsory. If it is compulsory, they get a lot less willing to participate. We saw that in China during SARS. When Beijing authorities decided things were so bad in one big apartment complex they were going to quarantine it, keep everybody in. Before they could get the police over there, everybody had fled, worsening the situation.

So we should not talk about quarantine. We should talk about isolation. We should be, especially you all in leadership positions, should be very precise in use of your terms as a way of educating Americans so that they understand what would be expected of them.

Mr. LINDER. Thank you. My time has expired.

Mr. Langevin?

Mr. LANGEVIN. Thank you, Mr. Chairman. I want to thank you again for convening this hearing.

I want to thank all of our witnesses who testified. It has been very enlightening.

Let me begin with Dr. O'Toole, if I could. You said, if I heard you right—and I guess I can speak for the whole panel—I should say that I did not hear a real ringing endorsement of the national response plan, so hopefully you will have a chance to comment further.

Dr. O'Toole, you said that, as I heard it, that most hospital administrators have not read the national response plan and they are not going to. Can you discuss this further? How do we get them more engaged?

Further, you stated in your testimony that there has traditionally been a wide gulf between the public health community and the medical care provider community. Can you elaborate on that and in what ways that gulf can be bridged?

I would also like to hear from Ms. Phillips and Dr. Seaberg after your answer.

Dr. O'TOOLE. I think what Secretary Leavitt is doing in going from state to state is a good start in getting the attention of hospital authorities. It has been our experience, and we have worked on hospital response issues for about 4 years now in the context of bioterrorism.

We are deeply involved in flu response with hospitals right now as well. It has been our experience that the hospitals do not necessarily think of themselves as part of the national response plan. They do not think of themselves as part of an incident command system. They certainly do not think of themselves as being under the orders of the public health system on most days.

So what you are talking about is a different cultural attitude about what their mission and responsibilities are. One of the problems with the pandemic flu plan that the president set forth, which I do think is a good beginning, although I do not think it spends nearly enough on vaccine or nearly enough on everything else, is the list of things hospitals should do.

The problem is it is an overwhelming list. There is not a hospital in the country that could actually implement everything on that list. It is not prioritized. There are some things on that list that are not within the purview of an individual institution, such as fix all the legal problems involved with sharing staff at your other hospitals.

What we need is a prioritized, very specific list that says every hospital in America has to be able to do the following. And then you need to send money. Okay? Hospitals do not have the funds to do this. Really, truly, they do not. It is not going to happen unless we figure out some kind of coherent system for getting the money and getting it to them, not in just one tranche, but over time.

I would suggest, though, back to the invest in solutions, not stopgaps, we have to make that list of what they have to do specific enough so that you can enforce against it. You have to hook it not just to the carrot of money, but to some kind of stick that they will

pay attention to, because these people are very busy trying to survive until next week.

On your public health care sector gulf, I think that is improving because of the efforts of people like Ms. Phillips and others, and because of the growing awareness of flu and bioterrorism. It is still a very big gulf. They really have very different jobs. These are very different cultures. Neither community actually has the resources to do a lot of outreach, the kind of table-tops, the kind of exercises that Mr. Blackwelder was talking about. Anything that gets people in the same room is a good thing, but it is going to take time. My choice for what to invest in first would be electronic health records that have an immediate connection to public health.

Mr. LANGEVIN. And you do not feel that right now the public reporting system in the public health system is robust enough to get real-time monitoring?

Dr. O'TOOLE. It is not even close. Most emergency departments have to go through each shift with a pencil and figure out, well, what did we see that Fran might be interested in, and then call it in. Since 9/11, in those entities that actually dealt with anthrax, that has gotten a little bit better and there are more electronic exchanges of information. But then, most public health authorities have to go through and say, am I going to investigate this or not. I mean, half of what got called in as emergencies did not warrant an investigation. It is a very laborious process right now.

The problem has been misconstrued to some extent. I do not think detection is as big a problem as management in the situation we are in during an epidemic. For that, we need real-time electronic health records.

Mr. LANGEVIN. I agree.

Ms. Phillips?

Ms. PHILLIPS. Yes, a couple of points to follow up on the surveillance discussion.

In Maryland, we have a beginning of a system that links what is happening in hospitals, particularly emergency rooms, with the public health sector, with the emergency responders, the EMTs. It is very basic, but it is an electronic system, so that in my office I can see the volume of activity in the emergency rooms in my county. I can see the volume of patients coming in who are likely to need ventilators. But I do not get anything close to the kinds of surveillance indicators that I would need to understand what is going on in terms of interpreting that.

I do believe that our system is a little bit ahead because of our experience with anthrax in Maryland. We have a ways to go on surveillance. So right now the surveillance system we rely on is the relationships between hospitals, the physicians, and the public health system and telephone and fax and postcards. So that is what we are working with.

Coming back to the issue of the plan, from a public health perspective, the direction, the guidance that we get on pandemic flu planning comes from the CDC. So that is a pipeline that, as you know, has released a document in December, I guess it was January, that was extremely welcome to all public health agencies across the country, to look at the federal guidance on planning for a pandemic.

I want to emphasize that in my remarks, I did try to emphasize that the role locally that I play is really a bridge with the public safety folks. I do not see through their pipeline, which is our state emergency management agency, FEMA, as well as the Department of Homeland Security on a federal level, I do not see that level of pandemic flu preparation training. So that I am the one now to do all of this work with our 600 firefighters and our 700 police officers.

So the request, I guess, that I made as far as coordination at the top level is that the kind of guidance that CDC is pushing out to the public health community be replicated on the public safety side so that we get some assistance. Right now, it is based on coordination and it is working at a local level, but it is working against some of those barriers as far as funding.

Mr. REICHERT. [Presiding.] The gentleman's time has expired.

The Chair recognizes himself for 5 minutes.

Thank you again for being here. I want to just make a couple of comments, and I have a few questions.

The point that you were making, Ms. Phillips, is one that I struggled with as a sheriff in trying to work with public health officials back in Seattle, and the law enforcement community not understanding their role in this new responsibility. I know that the secretary can identify with that same struggle.

What I hear, though, is really some good things are happening. There has been a lot of progress made in building partnerships. We have business represented here, where in the past when I was first assigned to a police car was handle the burglary, do not talk to the people, and just take care of business and on you go. Those so-called separations and silos were all in effect, and everybody had their own responsibilities. Now, today, we realize we all have to work together. So all of us are here.

What I have noticed, though, in your testimony, all of you together, first I would like to address a couple of frightening things that I heard. First, Dr. O'Toole, you said that the surge capacity would increase, for beds, by 300 percent, if we were hit by it?

Dr. O'TOOLE. If you use the CDC models on what it would take to deal with a 1918-type pandemic, and you plug in the current number of beds, in the Atlanta metro region, just as an example, then you need 300 percent of your current beds.

Mr. REICHERT. And 700 percent increase in patients.

Dr. O'TOOLE. A 700 percent increase in ICU capacity.

Mr. REICHERT. ICU capacity.

Dr. O'TOOLE. And you would need four times as many ventilators as one has on hand now.

Mr. REICHERT. And a 20 percent surge is acceptable?

Dr. O'TOOLE. Well, I think a 20 percent surge is a reasonable goal that you could ask hospitals to strive for. It is a stretch.

Mr. REICHERT. And then Dr. Seaberg says there is a 26 percent average increase of patients, and a 14 percent drop in hospital emergency rooms. Is that correct?

Dr. SEABERG. That is correct.

Mr. REICHERT. And then the last statement that you made, Dr. O'Toole, was, and you asked Chairman Linder, can I just say one more thing, and you said, we can do this. If you could just maybe

explain for a couple of minutes some of your thoughts along the lines of, with those big numbers, how can we do this?

Dr. O'TOOLE. Well, first of all, the way to solve the problem is to get a vaccine. I know that is not directly within your purview, but everybody ought to understand that we are not doing what we ought to be doing if you really think vaccine is the answer, as I do. That would transform everything, if we had an effective vaccine, and we had enough and we had it in time.

But suppose we do not have a vaccine. If we do not have a vaccine, then going to the hospital will not help you get through the flu in most cases. We are not going to have enough Tamiflu. It is not clear that Tamiflu is even going to be effective if we did have it on hand. So what you are talking about for most people is what we all do with flu. You go home and you go to bed; you take fluids; you rest; et cetera, et cetera. And you do not run around contaminating other people.

What we need to do is get that message across so that the people who seek medical care are those who are the desperately ill, and there are three or four ways that people are going to be desperately ill with flu, as far as we understand it. I can go into that, but you do not really care.

Those are the people who ought to go into hospitals. Everyone else ought to either stay at home, or if they cannot stay at home for whatever reason, they ought to be cared for in the type of facilities Ms. Phillips was describing, you know, gymnasiums where they are basically getting home care. It is not going to be alternative hospital care. As we saw in Katrina, a hospital is not just doctors and nurses and beds. It is a significant infrastructure. It is gases, oxygen, et cetera, et cetera. It is a whole infrastructure that you are not going to replicate in a gymnasium or a sports arena.

Mr. REICHERT. Is this process taking place today?

Dr. O'TOOLE. No.

Mr. REICHERT. Nowhere?

Dr. O'TOOLE. There is no master plan.

Mr. REICHERT. Does anybody on the panel have a comment?

Dr. SEABERG. This is not occurring. The problem with the federal response is it takes time to coordinate that. So what is going to happen is initial response is all going to have to be local. Compared to police, fire and public health, the hospitals and health care workers are clearly the weakest link in any health care response to this, without a doubt. They have not been prepared. Health care workers and hospitals have been unwilling to participate due to lack of funds. My hospital alone is nearly $1 million for a 1-hour training course.

So the number-one concern, if you asked health care workers, is surge capacity. We can barely handle what we have now, let alone a pandemic. In Florida, we are looking at ways to perhaps retrofit non-clinical space such as auditoriums, cafeterias, conference rooms, so that they can be surged up to clinical space, because until all this is set up by public health and federals, I am sorry, they are going to be coming to the hospital. The worried well will be coming to the hospital and to the emergency departments.

So we need to look at creating non-clinical space into clinical space. We need to reduce overcrowding, and H.R. 3875 is a step in the right direction. We need to train the hospital and health care workers to more long-term pandemic scenarios. And then we need to take these lessons learned, the best practices and lessons learned, and disseminate. We are spending a lot of money in each state to train people, but at least in the health care workforce, these lessons are not being disseminated. You have each state creating standard core competencies for hospitals. We should have national core competencies that everyone trains to. Yet, we are working on that through the American College of Emergency Physicians, but we do not have that yet. We need to have better coordination between federal, state and local.

Mr. REICHERT. Thank you.

My time has expired. The Chair recognizes the ranking member of the Subcommittee on Emergency Preparedness, Mr. Pascrell.

Mr. PASCRELL. Thank you, Mr. Chairman.

Dr. O'Toole, what is the main reason we have not developed the necessary vaccines?

Dr. O'TOOLE. It is hard and it is expensive. There are about 20 companies, as well as NIH, trying to develop a pandemic flu vaccine. There are not many expectations that they are going to make money out of that.

Mr. PASCRELL. Is there a sense of urgency?

Dr. O'TOOLE. I think there is a sense of urgency, but I do not think that has been translated into a strategic approach to how the world could get together and make a vaccine that works and in sufficient quantities. For example, there are things we ought to be doing in parallel that we are doing in serial. We just found out that the H5N1 vaccine that NIH has been working so hard on, we discovered last summer requires an enormous amount of the antigen, which is the stuff that gets grown in eggs that we have a very limited supply for and we cannot make more.

We were hoping that adding an adjuvant, which is a kind of immune booster to that vaccine would allow us to make more doses. It did not work. We should have done the adjuvant studies simultaneously with the antigen studies. We are doing a lot of things that we ought to do in a more organized fashion. We are kind of running the H5N1 trials, as far as I can tell, and one of the peculiarities, it is very hard to get the science. It is taking months and months to publish it. There ought to be a much more real-time exchange of information among the scientists involved.

As far as we can tell, it is being run pretty much like a normal research process. People are working hard, do not get me wrong, but with more money and more organization that is beyond the reach of the people in charge right now, we could do better.

Mr. PASCRELL. Let's take the example of Tamiflu. Let's take that example, since you brought it up. I think it is a good example. We knew very early on that there was some hope and possibilities. Whether at this particular time in history, February 8, we think maybe Tamiflu is not the answer. Anyway, the companies who make Tamiflu, particularly there is one major company, had no real signal from the federal government, as I understand it, to move forward with the research and development.

Am I mistaken, Dr. O'Toole?

Dr. O'TOOLE. I think it is more complicated than that, unfortunately.

Mr. PASCRELL. Okay.

Dr. O'TOOLE. We need a very robust process for figuring out what we are going to invest in scientifically. One of the truisms of vaccines and drugs is that they are really difficult to make. You have to get a long way into a very expensive process before you know if it is going to work or not. Last August, the New York Times said the problem is solved; the H5N1 vaccine that NIH is making works. All right?

Now, the government thus far has been very reluctant to invest gigantic sums of money, and we are talking billions of dollars here, in stuff that we might not need and might not work. What we need is a more open and much more robust process for understanding what is out there that might work.

Mr. PASCRELL. Yes, but what do we need to do that? We have heard that before, Dr. O'Toole. Let's get to the point. Let's get to the meat and potatoes here.

Dr. O'TOOLE. Okay, let's do.

Mr. PASCRELL. What are you suggesting we are not doing now in order to facilitate this research so that we avoid duplicity, so that we avoid research that is going to come up with nothing. What do we need?

Dr. O'TOOLE. The government needs to form a process that engages the intellectual firepower of the private sector, of the biopharma community and the university researchers.

Mr. PASCRELL. Isn't that what NIH is supposed to be doing or the Center for Disease Control supposed to be doing?

Dr. O'TOOLE. No, it is not what they are doing.

Mr. PASCRELL. Then what are you calling for, another agency? Are you calling for, what?

Dr. O'TOOLE. What I would call for is first of all put somebody in charge of pandemic preparedness across the agencies.

Mr. PASCRELL. Okay. That would be one thing that would advance this.

Dr. O'TOOLE. That would be one thing that would advance this, because you can see it is very complicated. There are things that are definitely in the lane of more than one agency. DHS and HHS are the big players. So is DOD.

Secondly, you have to find ways to really engage the private sector. The U.S. government at the federal level does not at this point have the talent it needs in sufficient numbers to handle this problem. That is not to say that people are not working their hearts out and are not competent. They are. Okay? But we do not have in the federal government in 2006 a lot of biopharmaceutical experts. We do not have a lot of epidemiologists. We do not have people with the skill sets we need. This is a new problem. You have to hire about 100 people.

You also have to pick off what the problems are that you need to focus on. One person cannot do hospital preparedness and public health preparedness and build a vaccine. It is too hard. I think Secretary Leavitt has done a great job, but he is one guy and he has

a huge portfolio beyond the flu. This is really big. We have to do something that is very extraordinary and very non-routine here.

Mr. PASCRELL. Okay. You answer I think is very clear, very focused—if I may conclude, Mr. Chairman?

Mr. REICHERT. Yes, sir.

Mr. PASCRELL. It is very clear, very focused. I gather from all these hearings, we do not have a sense of urgency. And secondly, we do not have a sense of direction, which is just as important. I mean, you could be, let's do this; we have to get this done right away, and not have any direction once they are going.

You have provided very clear direction. Is the federal government listening? I do not know. We are listening. We need to do something different than what we have been doing. We should be further down the line, is what I am saying. I do not know if you agree or disagree with me. We should have been further down the line. We are doing a disservice to the American people. I have heard all of these discussions before. We are doing a disservice to the American people. We are not moving the ball forward. We are relying on past strategies to deal with the major problems that exist right now.

Mr. REICHERT. The gentleman's time has expired.

Mr. PASCRELL. Thank you, Mr. Chairman.

Mr. REICHERT. The Chair recognizes the gentlelady from the Virgin Islands, Ms. Christensen.

Mrs. CHRISTENSEN. I did not realize I was up already.

I want to thank the chairs of the subcommittees for holding this hearing because health care has not really gotten the kind of attention that it has needed since this committee has been formed and actually since the department has been formed.

I have had the opportunity to be very much involved with the Katrina efforts, in trying to restore the health care infrastructure there. It has been a nightmare. If we did not believe the state of unreadiness of our health care system to withstand a natural disaster or a manmade disaster, I think we have seen it in full swing.

I had a lot of questions, some of which have been answered. I have heard several of you say that we need one person who is directing, a director of pandemic, or something like that, I think you called it, Dr. O'Toole. We have an assistant secretary at the Department of Health and Human Services for Emergency Preparedness and Response. I believe his name is Mr. Simmons. What has his role been with Delaware, with Maryland, or with the University of Pittsburgh Medical Center?

It seems to me that there is someone at the department that should be filling it. There is a position that is filled at that department and I would like to know what your experience has been with that office.

Ms. PHILLIPS. I do not know that particular position. I do know that the unit within CDC that is responsible for pandemic flu guidance is, I guess they are working very hard; we are waiting for the guidance, with respect to the funding. There has been a lot of discussion about the funding for development of pharmaceuticals. I suppose the other 15 percent of that pie goes to the preparedness, in terms of certainly distributing the pharmaceuticals, as well as a lot of the other planning work.

The difficulty from a public health perspective, and also public safety perspective, is that that is not something you buy. That is not a piece of heavy equipment. That is staff. That is a workforce. And so the problem with categorical funding that is about to come down, I suppose, is that it is short term and it is categorical, so that it is very tough in my department to take a grant, a small grant that is time limited, and to hire staff on that. Really, when you think about the response to get a vaccine from the strategic national stockpile, and then administer it to the population, that is not something I can buy though a contract arrangement as a one-time-only.

I did ask a ranking individual at CDC, how is it that a local health department can take this categorical one-time-only funding and best use it. I was told two things. I was told to buy a plan and to do a drill. You know, I feel that the kind of relationships that we need locally to sustain an all-hazards response is not something that an external contractor can provide for us.

Mrs. CHRISTENSEN. I was going to ask you, because you talked about the importance of the federal, local, state collaboration. I was wonder. I was going to ask you what your experience has been in terms of having that collaboration. You have gone through several events, as you mentioned at the beginning of your opening statement. What was your experience relating to the federal government, or coordinating with the federal government? What improvement might you have seen since that time?

Ms. PHILLIPS. We do look to the CDC. We look to the CDC for standardized, authoritative guidance on infectious disease.

Mrs. CHRISTENSEN. When you are in the middle of an anthrax—

Ms. PHILLIPS. When we are in the middle of an event, we go to that Web site. We pull of what is the most recent, the clinical protocols for testing for avian flu or for influenza type–A. We look to that.

Mrs. CHRISTENSEN. Do they back you up, to work with you?

Ms. PHILLIPS. We have had experiences where CDC, yes, where CDC does send special officers. In the BWI incident that I mentioned, we had quarantine officers that were involved with us with regard to the commercial carrier. So CDC has tremendous capabilities, as does our state, but oftentimes there is that lag of time between the time we get the notification and the time that we can get effective assistance.

Mrs. CHRISTENSEN. Go ahead.

Dr. SEABERG. The Department of Homeland Security has also recently nominated a medical director, who is also looking at the medical aspects of disaster. Particularly, we saw with Katrina that there was a lack of communication and coordination with national FEMA, national NDMS, and the local and state response. So he is looking at trying to coordinate that response much better, and also looking at the areas of hospital training.

Mrs. CHRISTENSEN. Mr. Blackwelder, we have met, probably, or some people from BENS had breakfast with us. I was really impressed. I have had the experience of talking with you and also been a Project Impact recipient in my district, which is basically what you are doing.

There were some experiences. After Katrina, for example, you offered communications vehicles that were turned down, and then they wanted to buy them from you. We are now approaching 6 months afterwards. Have there been some discussions with the federal government?

I know from experience how important it is setting up the business expertise, or the coordination before-hand, even being able to expand the personnel for administering medication or whatever. Has there been any discussion since we met back a few months ago?

Mr. BLACKWELDER. Yes. We have been in discussions with the Department of Homeland Security and the CDC. They are interested in expanding this kind of capability. Frankly, we are moving as fast as our resources allow us to move. We do believe we are just scratching the surface, really, in terms of mobilizing the business community. I gave some examples. We have partnerships in place in five regions around the country.

For example, when I spoke about response during Katrina, we did not have any kind of partnership in place there, nor did anybody else. So what you saw post–Hurricane Katrina was a pretty disjointed and haphazard business response effort. Literally thousands of businesses that wanted to help and tried to help, could not plug into the system. We know in major catastrophes, particularly in the case with pandemic flu, that there is not enough surge capacity in the government anywhere, federal, state or local, to meet the need.

We also know that business is willing to help. And finally, we know that business cannot plug into the system at game time. You cannot just show up on the field without having practice, without having gotten to know the players, without having written some plays and practiced them. So this is what we are trying to do as fast as we can.

It is important, we find, to build these kinds of teams and to do this kind of practicing at the state and local level. DHS and CDC are supporting what we are doing. We make sure that we are integrating with the national response plan and NIMS. We provided input to the private sector portion of the NRP, but really these relationships and the kind of trust that needs to be built between business and government needs to happen at the state, local and regional level. That is really where the action is.

Mr. REICHERT. The gentlelady's time has expired.

The Chair recognizes the gentleman from North Carolina, Mr. Etheridge.

Mr. ETHERIDGE. Thank you, Mr. Chairman.

Let me thank you for being here. I think you have recognized that the committee is interested, the public frightened, and looking for answers. Let me ask you to comment. I am going to try to zero in very quickly in 5 minutes.

If we go back to 1918 and the pandemic, as bad as it was, the world was an entirely different place. People did not travel like they travel today. They lived in rural areas. Communication, at best, was newspapers; no TV; no Internet; all the stuff we see today.

Yesterday, I had the opportunity to participate with some of my colleagues in a table-top exercise, along with administration officials, on this very issue. It focused on the federal response to the emerging flu pandemic. Most of the participants agreed that we are not prepared. We are not ready. A number of things came out of it, one of which is education, communication, coordination, a focus on what we are going to get to, the very things you have talked about, because the first thing that is going to happen is somebody is going to have a TV camera in someone's face and they will have to answer the question.

So I have a couple of questions, and I will get to them, because I think that is the critical piece. You know, we picked up today what is happening in Nigeria. That will be on the news tonight, and no one will really be paying attention yet, but some are. I am frustrated that we cannot get the federal officials working with the state officials in coordination across agencies.

I was state superintendent of schools for the state of North Carolina before my service here. One of the real challenges we had was getting people to work together across disciplines. That is not easy.

You can appreciate that, Mr. Mitchell.

The key is you have to make it happen. I think we have to do it here, because lives are at stake, and a lot of lives possibly.

Do you feel the information the public gets through the media about the impending situation, number one, is accurate? Number two, what are your most trusted sources of information?

I am only going to ask a couple of you that, because I will not have time. Ms. O'Toole, I want to ask you first how you would respond, and Mr. Mitchell, since you have statewide responsibilities.

Dr. O'TOOLE. Well, it depends on which media.

Mr. ETHERIDGE. I agree with that, but there is so much out there, we have to try to reach.

Dr. O'TOOLE. Yes. It has been very difficult to get information about what is happening on the ground. For example, it takes the WHO about 10 days using the best labs on the planet to figure out if the sick person in Turkey actually has H5N1. So there is a lag period between when you see something happening.

Mr. ETHERIDGE. The first information to close-out.

Dr. O'TOOLE. Closing that gap would be helpful in general. What the public is not getting from the media is what they need to do to protect themselves and their family in a crisis. Generally, people do not listen to that kind of information until the crisis is upon them. That is a tenet of public health education. You have to be ready to go the moment something breaks. Anything we can do beforehand in workplaces and in schools, and indeed in the U.S. Congress. I hope you all go home and tell your constituencies what you know. It would help.

We have to be ready to actually just kind of cover the media if this really happens. People have to know what they need to do themselves.

Mr. ETHERIDGE. Mr. Mitchell?

Mr. MITCHELL. The information I rely on comes from our state health secretary and our director of public health, Gus Rivera. That information comes to us in Homeland Security on a daily basis. On the statewide response, we are working very well together, between

Homeland Security, as well as the Departments of Health and Agriculture.

We are not relying so much on a federal response, if you will, as much as we are what do we need to do for ourselves. Of course, the federal response in the way of financing is very generous and very helpful, and very necessary in planning and getting information out to the community, about 30 days worth of food supplies so that you can self-quarantine in your home; basic hygiene measures that we should all be doing nonetheless; as well as encouraging the business community in particular to consider telecommuting, and for all of our state agencies for telecommuting. How do we maintain our state operations and how do we maintain commerce from remote locations, if you will.

Mr. ETHERIDGE. Thank you.

I think all of you heard, and I don't think anyone disagrees, during the Katrina exercises that there was a disaster. People worked hard. There's no question there was at all levels, and we do not need to go there.

What level of confidence do you have that the appropriate agencies now are refocusing, because they are doing so many other things, but this issue is so critical that we are paying attention to things we ought to be paying attention to? I know we are here having a hearing. We want to get it moving, but that the resources that are being put in the right pots, so that we get the biggest bang for the buck. Dr. O'Toole, you have already indicated we probably are not doing that.

So tell us what we need to do very quickly. You have shared some ideas. What do we need to be doing now to be prepared? There are those who would say, well, you know, we are spending all this money and we may not need it. Well, in our national defense, during the Cold War, we spent a lot of money on nuclear weapons and a lot of other things and never used them, thank God, but we had them there just in case. If we never have this, that would be a great benefit to the American people.

Mr. BLACKWELDER. I offer three things that the government can do to mobilize more of the private sector, where after all over 80 percent of the critical infrastructure resides. The first is to improve and make more consistent Good Samaritan laws, to protect liability of people who help. Now, we know that business is willing to help despite that fact that Good Samaritan laws are imperfect, but we also know that some are sitting on the sidelines because of that fact. So I think strengthening and making more consistent Good Samaritan laws is one thing.

Second, I encourage state and local government and business leaders to build these kinds of partnerships and create these kinds of relationships in advance. We know that with just modest investments, one or two full-time people to manage these sorts of public-private partnerships can deliver huge returns on investment.

The third thing is just to continue to encourage DHS and the CDC and HHS to make business an integral part of their strategic planning process.

Mr. REICHERT. The gentleman's time has expired.

The Chair recognizes the gentlelady from the District of Columbia, Ms. Norton.

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

I appreciate that you called this hearing. We are working on this issue. I am particularly appreciative to today's witnesses because they have come from the various points of view that we most need to hear from. I am very concerned about the public response to the possible epidemic. It is as if they think we are crying wolf, and you are beginning to hear them say, you know, nothing is going to happen, and even some pundits and members of the press are saying this. I think post–Katrina, we are doing exactly what we should do.

I am not convinced. I must say I am very concerned after hearing your testimony. One of my major questions, having heard your testimony, is I do not for a moment think that we are remotely prepared to do what would be needed if in fact something that would be called an epidemic, as opposed to if one or two cases broke out. I just have no question about it, from your testimony and from other testimony in a number of my other committees.

I am particularly interested, frankly, in what Dr. O'Toole or one of you called alternative institutions, because the notion of piling it on the hospitals or on clinics, I do not think anybody thinks would work.

I must say, Dr. O'Toole, you focused me on a question that I have had for some time, just on the basic science. This plan focuses on that. I am not critical of that. I am critical of our failure to deal operationally, but I am not critical of the federal government focusing on the vaccine, because that is really the only institution that can do that. That is what your federal government is for.

So I think they have to begin there. And then they have to look at what has happened with flu. You know, the flu we have right now, the flu that we have every year. We don't have any vaccine for that. So here we are talking about a vaccine for what is an unknown disease, and you expect the citizens of the United States to believe that we, the United States, can develop a vaccine for something that no one ever heard of until a couple of years ago.

No wonder there is lack of confidence in the public in our capability. Well, 30,000 people die every year. We know they are going to die every year and we still do not know what to do about it. We had some of the same problems to arrive this year, just in distribution of that flu vaccine after what we had last year, and we are trying to convince the public that we can not only develop a vaccine, but we can distribute it, and do not worry, we are starting early, so you see the evidence of it.

They will look at flu, the flu that their mother-in-law gets; the flu that they keep their children from getting, to measure whether or not we can do that. You know what? I think Congress ought to look there, too.

And I heard Dr. O'Toole talking about electronic health retrievals. You know, we are ground zero there, too, so that is like beginning with the vaccine. Everybody considers that a frontier idea.

Let me begin by asking this. The Spanish flu we all go back to as the marker. I cannot understand this coming pandemic, or if it will really be avian flu or something else that we really are not talking about. It ought to be much worse now. We have a global economy, everything moving at lightning speed. That is not what you had in 1918, the Spanish flu.

Moreover, this should be facilitated by the fact that birds fly everywhere, and yet nobody has seen it here, and frankly the average American says, I hope you all work on something that I am really interested in, like the flu we get every year.

So I do not understand why this is a first priority, as opposed to some other viruses that could come around the country. I do not understand, for example, whether or not this virus is anything like the AIDS virus. Did it linger in animals for some time and slowly move to human beings? Now, of course, it is a real epidemic. I do not understand how avian flu, which so far a bird gets, we can find no proof, no evidence of how it has even moved to the human being, or if after it moves to a human being, it has been spread to other human beings.

So my concern is of the viruses that may be coming around the world, this is the one, if it hasn't been here yet, and if the flu that comes here every year, we cannot do anything about, I am still not sure why this is at the top of the list of the various kinds of viruses that could come, much as I believe we are correct to focus on this. I wish you would help me understand, you know, it has been since 1918, why we haven't gotten something already, and the question I pose.

My time is already up. Please, Dr. O'Toole. I would also like to get something on alternative institutions, what kind of alternative institutions.

Mr. REICHERT. The gentlelady's time has expired.

Ms. NORTON. I am sorry. Could she at least be able to answer the question? I will not open my mouth again.

Could I say that I did not realize I was taking all the time to ask a question, because I heard others, and I did not realize I was taking any more time than they were. But if I could ask the indulgence of the Chair, if she could just answer.

Mr. REICHERT. Dr. O'Toole?

Dr. O'TOOLE. The question is why worry, and why worry about this, and why worry to the point where we are talking about spinning up the entire government and everybody else to get ready.

We do not know why the 1918 pandemic happened, but here is what we do know. Influenza viruses of all different types circulate in wild birds all the time. They normally do not hurt the birds. Every once in a while because of the genetic propensity of the virus to re-assort its genes, you get a flu virus that is new and that has the ability to make humans sick. If it is a completely new virus to which we have no previous exposure and hence no immunity, you get a pandemic. Sometimes they are not a huge deal. In 1957 and 1968, we saw new types of flu. It was a pandemic and killed a lot of people, but did not perturb the world in a fundamental way.

What is different here is that we have never seen, first of all, a new flu virus. This is a new flu virus we have never seen before, this H5N1, that makes birds this sick. It kills chickens in 24 hours and it is killing a lot of wild migratory fowl as well. So we have never seen one this virulent and we have never seen it in this many birds, who are spreading it to poultry that are in contact with humans.

There are hundreds of millions of poultry in Asia who are in contact with these wild birds who are carrying H5N1, and those hun-

dreds of millions of poultry are in direct contact in Asia and in the Urals, for example, with humans. They are backyard birds. If this were just happening in large blocs under corporate control, as is the case in Delaware, we could imagine controlling it. But we are not going to get rid of this H5N1 that is now in the wild birds, and there is no way really, practically to stop the wild birds from commingling and sickening the chickens.

So the are gazillions of copies of this virus now literally flying around the planet, and this is a virus which normally, under normal circumstances, moves its genes around, takes new genes from other viruses that are circulating in the birds and in humans, and re-assorts and makes new viruses. If this virus learns how to transmit, we are talking about a pathogen that kills 50 percent of the people that it infects. Remember in 1918, only 2 percent of infected people died. And as you point out, Congresswoman, everybody is moving around faster, further, et cetera, et cetera, and more routinely.

So there is that possibility of a calamity. We do no know what it would take to make H5N1 transmissible, but it is moving. It is evolving and it is changing as we speak. So people who understand flu and who watch it are worried. I will only say that we could control seasonal flu. We just don't, but that is within achievable horizons.

Mr. REICHERT. Thank you.

The Chair recognizes Ms. Lowey.

Ms. LOWEY. Thank you, Mr. Chairman.

I also want to thank the ranking member as well, Mr. Chairman, for organizing this very important hearing.

To segue from Dr. O'Toole's comments, some of us that serve on another committee, Labor HHS, the one that funds CDC and NIH, have been concerned about this for a very long time and have been expressing our strong feeling that this is an urgent situation.

I remember a hearing in October 2004 where we had people testify and we talked about the fact that if in fact we expanded our seasonal vaccine supply, we would have the capacity to manufacture in this country additional vaccine which would address the avian flu. Of course, we didn't and we knew this, and I am sure the experts knew this before.

Not being a physician, I believe the physicians who have been briefing us, we knew this in 2004, October. We have been talking about it, many of us, since. And the process is moving so slowly. I want to congratulate this panel for what you are doing locally in sounding the alarm. I just wish more people would listen.

Dr. Seaberg, even addressing the surge issue, I believe you talked about that. In the president's pandemic plan, as you probably know, there is no money for surge capacity. This was discussed in the New York Times article.

Many of us also served on this committee when BioShield was passed. In fact, there was another article, I believe it was the New York Times, talking about Stewart Simonson, the man who oversees Project BioShield. Before he was appointed to that position, he was a lawyer for Amtrak. There had been some questioning about his capability by both Republicans and Democrats. The example that was discussed on 60 Minutes was that a company, it is not im-

portant to even mention it, a biotech company was authorized to make a product that would deal with radiation. The company went ahead expecting to produce 10 million doses, and Stewart Simonson authorized 100,000 doses. The company went broke, et cetera, et cetera, et cetera.

For those of us who have been asking Dr. Fauci and Julie Gerberding about Tamiflu and vaccines and they are working on both, I said if Tamiflu is important, if you really think it will mitigate the disease by shortening the disease, then why are we covering 1 percent of the population, when England is covering 22 percent; France, 20 percent; and Canada, 17 percent? And now we are trying to push the companies to manufacture more. And yet, as someone mentioned here, this company did not even get the signal for it to go ahead and manufacture. So now they won't even be ready to cover all the population by 2007.

So we have had some real problems. There is a lack of funding. The localities complain about unfunded mandates in the latest plan that has been produced by the administration. They are asking localities to pay for 25 percent of the Tamiflu. Now, is health going to depend upon where you live? Or does the federal government have a responsibility, if they are sending a signal that this is a good thing, to make sure that we are producing enough on the federal level.

It seems to me, we still do not know who is in charge. I have had many, many, many meetings, in addition to the hearings, on this issue; Homeland Security for some things; CDC for other things. We saw what happened with Katrina when no one was in charge. The military told us they were able to move the equipment in, but once it was in there, it was like Paul Revere brought back again. You heard stories of people throwing bottles down to tell people, others who were in charge, where to go.

So I don't even know if I have a question at this point. If I am expressing frustration, having worked on this for a long time, sounding the alarm for a long time, I just appreciate what you are doing on the local level. I also want to say, if I have a minute or so left, I do not know where I am.

Mr. REICHERT. You are on yellow.

Ms. LOWEY. I am on yellow.

I also serve on the Foreign Operations Committee. In this area, I support the president 100 percent. Fight it over there, and we are not fighting it over there adequately. There is not adequate surveillance. We are not working with the governments adequately to compensate the farmers to do adequate culling. They are paid such low wages anyway that we could certainly replace their income.

So whether it is producing antivirals, whether it is the local plans in place. You are all exceptions. There have been many articles, which I do not have time to quote here, talking about how inadequate the planning is on the local level, because they are not getting adequate direction from the feds on communication, on surge capacity, on interoperability.

So, once again, thanks to the chairman.

I hope we can continue to work with you, and I hope that we can replicate your successes across the country, because there is sure a lot needed. I do believe this is coming, if not now, I hope it never

does, but we should be ready and treat this as a national security issue, because frankly we do not use all the bombers that the military makes, but we all vote for that defense bill. We should be providing exactly what is needed.

Thank you very much.

Mr. REICHERT. The Chair thanks the gentlelady for her statement.

The Chair now recognizes the gentleman from Maine, Mr. Markey.

Mr. MARKEY. Massachusetts.

Mr. REICHERT. I am sorry. Massachusetts.

Mr. MARKEY. You know what? Maine was part of Massachusetts until the compromise of 1820, when letting Missouri be a slave state, we also broke off the top of Massachusetts, called it Maine and had two more anti-slave senators.

[Laughter.]

We are proud of it.

According to the Department of Homeland Security's budget in brief, released earlier this week, the department's preparedness director is the focal point to build our nation's preparedness to respond effectively to attacks, major disasters, and other emergencies. Clearly, a bird flu pandemic would be a major disaster and public health emergency for our country, with an estimated 2 million deaths in the United States alone.

Earlier this week, the Bush administration submitted its fiscal year 2007 budget request to Congress. It seeks $3.4 billion, which represents a cut of $621 million compared to the funding level enacted in fiscal year 2006. This funding cut includes a $613 million reduction in funding preparedness grants and training for first responders and emergency officials in communities across the country.

Dr. O'Toole, given the current lack of preparedness for a bird flu pandemic that you described in your testimony, should the federal government be cutting emergency preparedness grants to state and local emergency personnel by $613 million over the next year?

Dr. O'TOOLE. No, but it should reorganize those grants.

Mr. MARKEY. Excuse me?

Dr. O'TOOLE. It should reorganize those grants.

Mr. MARKEY. Even if you organize it, can you do a good job if you are taking $613 million away from emergency preparedness?

Dr. O'TOOLE. I do not know what that $600 million is, Congressman Markey. I suspect it is a bad idea.

Mr. MARKEY. Okay. Let me ask, has anyone else focused on the $613 million cut the Bush Administration is proposing in emergency grants? Yes, sir, could you please?

Mr. MITCHELL. Yes, we certainly are in Delaware. The money for law enforcement and terrorism, and so forth, has been cut. We are in the law enforcement arena feeling it very desperately, frankly. It is money that should not be cut.

Mr. MARKEY. Okay, thank you. I agree with you. I just think that the Bush administration is nickel and diming homeland security, cutting emergency preparedness even as we are identifying that it is already an area of weakness. They are cutting it even further at the local and state level.

Now, the Bush administration's budget also cuts Medicare payments to hospitals. In my home state of Massachusetts, the Bush administration would cut Medicare payments to hospitals in my state by $213 million over the next 5 years. Dr. Seaberg, how would that affect the local community's ability to respond in the event of a pandemic flu?

Dr. SEABERG. Well, it would again increase the overcrowding of emergency departments. You would have less physicians wanting to take care of Medicare patients, and their only alternative is going to be coming to the emergency departments. I am in the response business. I believe avian flu is a serious threat, as is influenza, smallpox. I am in the response business primarily, and I need to decrease my overcrowding in the emergency department. I have to have better surge capacity in the hospitals.

Mr. MARKEY. So Medicare cuts will undermine actually your ability to respond. Is that what you are saying?

Dr. SEABERG. It could, yes.

Mr. MARKEY. Okay.

How about you, Ms. Phillips, do you agree with that, that cuts in Medicare funding will undermine hospitals' abilities to be able to respond?

Ms. PHILLIPS. Actually, the Medicare cuts are not ones that in public health that we have focused on.

Mr. MARKEY. That's okay. Then this weekend The Washington Post reported that because our emergency departments are so overcrowded nationwide, an ambulance has to be diverted to a different hospital every minute in our country. Now, a couple of years ago there was an accident on Route 93 in my district. It basically overcrowded the emergency room, just a very small accident. This is in greater Boston, the medical capital of the United States.

Dr. Seaberg, in your testimony you described the challenges currently faced by the approximately 4,000 emergency departments. In your opinion, about how many of those 4,000 emergency departments are prepared today to respond to a pandemic flu outbreak in their communities?

Dr. SEABERG. None.

Mr. MARKEY. None.

Dr. SEABERG. In a small disaster, a car accident, you know, I had one 2 weeks ago—

Mr. MARKEY. No, I am talking about a pandemic. How many are prepared to respond today—

Dr. SEABERG. None.

Mr. MARKEY. Okay.

Now, the president's budget set aside $2.3 billion to help prepare for pandemic flu. However, he has not specified how he would like that money to be used. Clearly, the $350 million provided last year is not enough, by your testimony. How much of this money to the states, the cities, and towns need to have in order to be prepared in the event of a pandemic in the view of Dr. Seaberg?

Dr. SEABERG. I cannot give you an exact estimate. I may be able to get that information for the record. But right now, we can barely handle what comes in our departments today. We are overcrowded. Hospitals are at capacity. We cannot handle what we have today, let alone a pandemic.

Mr. MARKEY. Okay. Now, after September 11 and the anthrax attacks, Congress passed the Public Health Security and Bioterrorism Preparedness and Response Act. This bill authorized $1.6 billion for states and towns to prepare for a public health emergency. In January of 2004, GAO found that while this Act improved our country's preparedness, we are still not prepared. Ranking Member Thompson and I have asked GAO to study the barriers to preparedness and provide recommendations to help us ensure that the funds provided for a pandemic influenza do more to improve our nation's safety.

What do you think caused the Public Health Preparedness Act to fall short of its goal of preparing the public health system for a national emergency? Do you have any questions that you think the GAO should look at with regards to our public health preparedness?

Secretary Mitchell, would you please respond to that, and the Ms. Phillips?

Mr. MITCHELL. Suffice it to say that we in the state of Delaware have enormous needs. On the one hand, we are a small state, only 800,000 people. On the other hand, we are large enough and we are within a metropolis of a four-state area that we are a great risk. The funding is needed to address the issues. How it is planned to be spent I think needs a lot of state and local coordination and recommendation. That is what we are about doing as we speak.

Mr. MARKEY. Ms. Phillips?

Ms. PHILLIPS. Yes, I would like to make three points very quickly. First of all, the experience that we have had, unfortunately some of those grants have been very categorical, so we have been focusing on smallpox, and then we stopped smallpox. I would like to think that in the future it would be a more sustained, all hazards approach, rather than each agent by agent.

Secondly, as I mentioned before, if it is not continuous funding, if I do not have confidence that I can meet a payroll with that grant next year, then I cannot hire the staff who will be on the other end of the call when a physician or emergency room makes a communicable disease report.

Thirdly, a lot of problems have arisen with the jurisdictional specificity of some of this money. My county straddles Baltimore in the northern part and D.C. in the southern part. I am only one health department, but I am in two metropolitan areas and it is very tough to juggle zip codes as to which resident gets which grant funding.

Those are three areas that I would like to see streamlined.

Mr. MARKEY. I thank each of you. You are like latter-day Paul Reveres warning us that the bird flu is coming. I hope that the Bush administration listens to you. I do not think they can be cutting by $613 million emergency preparedness at this time. I think it is a bad decision, a terrible decision. I am going to make sure the Congress votes on restoring that money to the Bush budget. I just think it should be an additional $600 million, not less.

We thank you so much for your guidance today.

Mr. REICHERT. Thank you, Mr. Markey. The gentleman's time has expired.

Mr. Pascrell, you have an additional question?

Mr. PASCRELL. Thank you, Mr. Chairman.

I have quickly two questions. I want to associate myself with the questions and answers of the gentleman from Massachusetts, soon to be a state, but within the United States.

[Laughter.]

Dr. Seaberg, I want to thank the panel for your boots-on-the-ground responses because I look at it this way. Either the administration is in denial or they are playing with dire cynicism. I do not know which it is. This is all A, B, C, and D of the question. What are your protocols for epidemiological reporting? What are your protocols?

Dr. SEABERG. We are part of the state Department of Health. They right now just collect our total census information, as of right now. We are going to look eventually to include diagnoses, now that we have an electronic medical record. Other than that, our information on epidemics and so forth comes through the state department of health through emails and other ways.

Mr. PASCRELL. Have you been asked by the CDC to report flu symptoms to them?

Dr. SEABERG. We have not at this point been asked to report flu symptoms.

Mr. PASCRELL. Do you test patients presenting flu-like symptoms like H5N1?

Dr. SEABERG. Obviously, if we suspect that, we would report it to our local department of health.

Mr. PASCRELL. Do you by law have to do that? Or are you doing this simply because—

Dr. SEABERG. If we think it is avian flu, there is mandatory reporting for certain infectious disease in Florida, yes.

Mr. PASCRELL. And isn't there a relatively inexpensive urinalysis test, $20, that should be available to inform you, and therefore inform CDC as to what is going on?

Dr. SEABERG. For avian flu?

Mr. PASCRELL. Yes.

Dr. SEABERG. We do not have that. We do have the regular influenza test. We do not have avian flu.

Mr. PASCRELL. And by the way, did you get your stockpile that you were supposed to get for that?

Dr. SEABERG. Vaccines?

Mr. PASCRELL. Yes, regular flu?

Dr. SEABERG. Well, we have our supplies, our hospital did.

Mr. PASCRELL. And it was adequate?

Dr. SEABERG. Yes. Actually, the department of health did get an adequate supply in Alachua County.

Mr. PASCRELL. Can I ask one more question, Mr. Chairman?

Mr. REICHERT. Yes, sir.

Mr. PASCRELL. One more question of Dr. O'Toole. Dr. O'Toole, what tools do we have to limit the influx of disease into our country from abroad? And how effective to you think these measures are?

Dr. O'TOOLE. I do not think we have any effective tools. I think that for flu, not for all diseases, but for flu, screening incoming airline passengers is going to be very expensive and very low-yield.

I also think that it does not make a lot of sense to screen airline passengers without screening people coming in via boats or over

the border from Mexico or Canada, et cetera, et cetera. I think to do fever checks at all border crossings would have a very profound effect on commerce.

If we are contemplating doing airline fever screening, for example, which again I do not think will work on flu because half of them are going to be contagious before they have a fever, but if we are contemplating doing that, before we do something that would be that intrusive of commerce, I think the CDC should really put together the evidence that says this makes sense. I have not seen that evidence. We have gone looking for it. We do not think it is there.

I think because of how fast flu moves and because of the way the world works now, once it is out, it is going to be out. It is going to be pretty much everywhere within a few months. We are going to have a very limited time to respond. Then what we want to do is try and slow the spread of disease, and if we can keep people from getting sick. That is really going to depend on mass cooperation. It is going to depend upon doing things at the local level.

Again, we ought to think of all of this as return on investment.

Mr. PASCRELL. Mr. Chairman, I thank you very much.

Mr. Chairman, I would contend that this is even more evidence that chapter 12 of the 9/11 Commission's report on global strategy must be taken into account when we are trying, and every day there are examples. If we are not in communication. If we are not at the table with these nations, when we are not going to do what we have to do.

I would think, Mr. Chairman, that that chapter 12 should be taken almost from memory by every member of Congress and anybody who is in the public realm to protect us. We cannot protect the citizenry of this country unless we have good relationships with the countries, or try to have good relationships with these countries, until they understand, too, how serious the subject is that we are talking about.

Mr. MARKEY. Would the gentleman yield?

Mr. PASCRELL. Yes.

Dr. SEABERG. Mr. Chairman, could I make one correction to my testimony? If we do have laboratory-confirmed information, that is reportable to the state. I misspoke.

Mr. PASCRELL. By law?

Dr. SEABERG. Yes.

Mr. REICHERT. Mr. Pascrell's time has expired.

Mr. Markey is recognized.

Mr. MARKEY. I thank the chairman very much.

Dr. O'Toole, I am actually on this subject preparing legislation that would encourage countries to comply with the World Health Organization's international health regulations and establish an annual country-by-country report on the degree to which nations are complying with the regulations' requirements, including prompt notice to the World Health Organization of diseases such as bird flu, SARS, and other diseases.

Do you think such legislation could be helpful as a public health tool?

Dr. O'TOOLE. Yes. If we can find a way to get countries to actually enforce and practice the international health regulations,

which obliges them to report disease outbreaks, that would be very helpful. The rub, of course, is that it takes time to confirm, usually more time than the media needs to put it on the airwaves.

Secondly, confirmation of a big disease outbreak is automatically an economic threat, a hit, really. So countries are understandably very reluctant to say we have a problem until they can prove they have a problem, and then there is a lot of national price, et cetera, et cetera, involved.

So it is complicated getting it to happen, but that is what needs to go on. Everybody had to understand we are all in it together.

Mr. MARKEY. You know, we are in a world now of trade and travel and tourism. In China and many other countries, they want desperately to be given entry to the World Trade Organization. They say it is central to their development. And yet, the more obviously that we trade with China and other countries, the higher the risk that diseases from those countries will come to our country and to the West generally.

So you wind up in a situation where many of these countries want the benefit of free trade, the benefit of global tourism, but do not want the concomitant responsibility as a member of the World Health Organization to then report promptly diseases which could be much more easily transmitted across our world than could before this era of the World Trade Organization. So we now are in a situation where 2 million people cross international boundaries every day, and a lot of it because of this speeded-up world trade.

So what recommendations would you have, Dr. O'Toole or anyone else on the panel, to build some teeth into a requirement that these members who are participants in this global trading regime now accept their responsibility to notify immediately, notwithstanding their national pride. They do not have too much pride to join the World Trade Organization. They do not have too much pride to send their products to our country. But you are saying that they have too much pride that they do not want to admit that they have a disease which can affect us and others in the West.

So what recommendations do you have to us so that we can ensure that they understand their concomitant responsibility to give us the public health notice?

Dr. O'TOOLE. That is me, Congressman?

Mr. MARKEY. Yes, please, or anyone else.

Dr. O'TOOLE. I would suggest two things. First of all, any hammers or sticks that you have that you think would actually work I think are certainly worth contemplating. I think if we built a rudimentary international disease surveillance system that was grounded in the health care and public health care and laboratory network, we would have to build the laboratory network, around the world, word would get out really quickly, regardless of what the governments wanted or tried to prohibit, because of the Internet and because of things like ProMED.

We knew a lot about what was going on in China with SARS before the Chinese government told us. We know a lot about bird die-offs in western China in spite of the government saying nothing is happening, again because of the Internet. So if we build the surveillance system so that we can see the disease outbreaks, which we cannot in most parts of the world today, until they are really

a forest fire, I think the tourist industry will make its own decisions.

Mr. MARKEY. All right. Well, again, what you are saying is that the Internet can serve as an early warning system, but when you have situations where Microsoft is agreeing to cooperate with the Chinese government not to allow anything on their Internet on penalty of crime, then I think that is, honestly, a pretty weak place to be dependent, where time is of the essence in a public health situation, where this disease can spread so rapidly. So we need other drivers, other hammers here, that will put it through.

Yes?

Mr. MITCHELL. In Delaware, we have a situation where because of our poultry industry we want immediate reporting. We made a decision to indemnify each grower that if a flock is infected, the state will buy the flock. So it takes out the economic scare, if you will, of losing a flock and so forth.

Mr. MARKEY. So are you saying that we should insist that countries adopt policies that they will promise to indemnify any farmers or others who are affected by this?

Mr. MITCHELL. I am saying that in Delaware, that is what we did to encourage reporting, and also that we do not publicly report which poultry farm has an infection. We report that there is an infection, but we do not by law, and it was passed by our General Assembly. Whether or not that would work in another country, I do not know.

The issue of the government telling our government, a foreign government telling our government about a disease is one issue. Whether or not farmers in that country are telling their government about a disease is another.

Mr. REICHERT. The gentleman's time has expired.

Mr. MARKEY. Thank you, Mr. Chairman.

Mr. LANGEVIN. I want to thank you all for your testimony. This has been a long afternoon, but a fruitful discussion and your input has been invaluable.

Just briefly, we had a discussion earlier, I think Dr. O'Toole, you were mentioning the work that CDC was doing in terms of trying to make a vaccine for the H5N1 virus. It is my understanding, and I just want to clarify it for the record, that what is going to be most effective, and one of the constraints that we have in terms of making vaccine is that we actually have to wait until the vaccine mutates to easy human-to-human transmission before we can actually make a vaccine that is effective for H5N1. Is that a correct understanding?

Dr. O'TOOLE. Maybe. It is possible. We and others are trying to make vaccines right now against H5N1. It may be that H5N1 ends up mutating into a pandemic and that the pandemic strain is close enough to the vaccine that we created today that it will still have some cross-reactivity.

Mr. LANGEVIN. But we do not really know that?

Dr. O'TOOLE. We do not know that that will be the case. There are other strategic options that have a basis in science, such as trying to create a flu vaccine that would be good against all sub-types of flu. This would solve Congresswoman Norton's problem of every year we have to make a new flu vaccine. That science ought to be

very heartily supported. It is getting minimal amounts of money right now.

There are a variety of scientific strategies you could conceive of to speed up the process and to put your bets on more than one square, which we are not doing right now in what I would consider a robust fashion. But you are generally right. That is definitely a problem.

Mr. LANGEVIN. Thank you all.

Mr. REICHERT. Thank you.

I want to thank the witnesses and thank the members for their questions.

Members may have additional questions for the witnesses, and we will ask that you respond to them in writing. The hearing record will be open for 10 days.

Without objection, the subcommittee stands adjourned.

[Whereupon, at 4:33 p.m., the subcommittee was adjourned.]