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PANDEMIC INFLUENZA: STATE AND LOCAL EFFORTS TO PREPARE

HEARING

BEFORE THE

AD HOC SUBCOMMITTEE ON STATE, LOCAL, AND PRIVATE SECTOR PREPAREDNESS AND INTEGRATION

OF THE

COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS UNITED STATES SENATE

ONE HUNDRED TENTH CONGRESS

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WEDNESDAY, OCTOBER 3, 2007

U.S. SENATE,
AD HOC SUBCOMMITTEE ON STATE, LOCAL, AND
PRIVATE SECTOR PREPAREDNESS AND INTEGRATION,
OF THE COMMITTEE ON HOMELAND SECURITY
AND GOVERNMENTAL AFFAIRS,
Washington, DC.

The Subcommittee met, pursuant to notice, at 2:35 p.m., in Room SD–342, Dirksen Senate Office Building, Hon. David Pryor, Chairman of the Subcommittee, presiding.

Present: Senators Pryor, Akaka, and Sununu.

OPENING STATEMENT OF SENATOR PRYOR

Senator PRYOR. I call the Subcommittee to order. Senator Sununu is on his way, but he wanted us to go ahead and get started, so he will join us and probably have some questions in a few moments.

Let me thank everyone for being here and welcome everyone to the Senate and specifically to our Ad Hoc Subcommittee on State, Local, and Private Sector Preparedness and Integration. I know everybody is busy, has a lot going on, but to come and talk about something as important as a flu pandemic, I think it is a very important part of the process to make sure that we are prepared. We hope that day never comes, but we hope that this country is prepared if that day should come.

I would especially like to welcome Dr. Paul Halverson. Thank you for coming up from Arkansas and I look forward to hearing from you in the second panel.

Let me just make a few opening comments and then I would like to jump right in with our first panel. The first thing I would say is that for most Americans, the idea of a flu pandemic is abstract. When we hear about it on the news, it seems to be pretty much in birds and on the other side of the world. I think for a lot of people in this country, even though they know it is a potential threat, it is not real, and I think we, as leaders and as planners, need to make sure that we are ready in the event that it does come.

The thing that concerns the experts about a flu pandemic is when you look at bird flu around the world, the numbers are startling. How rapidly it spreads through an avian population is very alarming, but also when you look at the humans who have been infected—there have been 329 infected with bird flu and 201 have

passed away. So 61 percent of the people that have had it have died from it. Those are very alarming numbers.

You can see this chart here with the confirmed cases by age and outcome and you see some very disturbing numbers there because it is not one of those diseases that hits young people and old people.[1] If you get it, you have a very real chance of not surviving contact with bird flu.

So the concern would be is if you have a flu with these characteristics and it mutates into a contagious human disease, the consequences could be very dire. I don't want to talk like a science fiction movie here, but some of the scenarios that people have talked about really cause great concern. The number of Americans who could not survive this, what it could do in terms of overwhelming our health care infrastructure, the restrictions on travel, maybe having to institute some sort of quarantine or martial law, there are a lot of ramifications of this that we need to think through and be prepared for in the event that it does come.

The other thing that we see is that a flu pandemic is problematic for the government because there are so many different levels of the government that have to deal with it. Just on the Federal level, you look at DHS, HHS, Homeland Security, and other agencies, but it is also a State and local issue, as well. Health officials are involved, as are first responders. It is a lot of local officials that have to make very critical decisions in a short period of time.

That is why we keep coming back to planning and being able to test our planning. Today, Senator Sununu and I wanted to encourage dialogue and make sure that everybody is planning like they should be, and we are working through this in preparation for that day, if it ever comes.

With that, let me go ahead and introduce our first panel. Again, Senator Sununu may have an opening statement in a few moments. We will have probably one or more Senators in addition to Senator Sununu that come in throughout the course of this hearing. We have votes and a lot of other committee hearings going on right now, so it is a pretty hectic day in the Senate.

But let me go ahead and introduce our first panel. First we have Rear Admiral William Vanderwagen, who serves as Assistant Secretary for Preparedness and Response at the U.S. Department of Health and Human Services. His office is charged with leading the Nation in the prevention, response, and reduction of adverse health effects of public health disasters. He is the Department's senior advisor to the Secretary for matters relating to bioterrorism and public health emergencies and he will be discussing the progress his office has made as well as efforts they are making in coordinating public health preparedness across all levels of government.

Our second panelist will be Dr. Tilman Jolly. He is the Associate Chief Medical Officer of the Office of Health Affairs at the Department of Homeland Security. Dr. Jolly brings an extensive background in emergency medicine and medical operations, planning, and consulting. In addition to practicing emergency medicine and serving on the medical planning staff of events, including five Super Bowls and the U.S. Open Golf Championship, he has spoken

[1] The chart referred to appears in the Appendix on page 90.

and published extensively on these subjects. Today, he will report on the progress of the DHS Office of Health Affairs in coordinating with relevant DHS Departments as well as other Federal, State, and local agencies.

Admiral Vanderwagen, would you like to go ahead and start, please.

TESTIMONY OF REAR ADMIRAL WILLIAM C. VANDERWAGEN, M.D.,[1] ASSISTANT SECRETARY FOR PREPAREDNESS AND RESPONSE, U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

Admiral VANDERWAGEN. Thank you, Mr. Chairman, and it is a real pleasure to be here. I think you spoke to partnerships and I think there is a partnership between the Legislative and the Executive Branch that has to be strengthened and built upon.

Let me submit my written testimony for the record and I will speak for a few minutes and summarize.

As you noted, the Assistant Secretary for Preparedness and Response is the responsible party for Health and Human Services (HHS) in coordinating medical and public health responses. It was established about 10 months ago, December 19, 2006, with the signing of a law, the Pandemic and All Hazards Preparedness Act, that transferred many authorities to our responsibility, including NDMS, the hospital preparedness programs, enrollment of volunteers, and so on, various authorities related to the Medical Reserve Corps, partnerships with the Centers for Disease Control (CDC), etc., and many new authorities related to the development of medical countermeasures, and that would include such things as vaccines, anti-virals, diagnostics, etc. And in August, we assumed leadership in our office for pandemic flu for HHS.

As you noted, pandemic flu really could be quite a catastrophic event and it will affect all sectors of our society, and it involves planning and interoperability between a wide variety of many sectors in this country. Public safety, energy, transportation, commerce, labor, all have a role in addressing the issues and preparing for a pandemic flu.

About a year and a half ago, Congress and the Executive Branch did lay out a plan for how we would try and address issues with pandemic flu—a strategy. That strategy was based on a theory of victory that was not with the expectation that we could absolutely stop dead in its tracks this disease, but, in fact, we could delay its emergence and we could reduce the number of people who became ill with this disease. And the critical elements of that strategy was the development of vaccine capability, anti-virals for treatment, and recall at that time production capability for anti-virals was relatively small. In addition to that, there were commitments to community mitigation strategies and the development of surge capabilities, including additional facility space and people with skills who could be employed in addressing this illness as it hits in many communities around the Nation.

We have made pretty good progress, and I think we will hear from some of our State and local colleagues today about the

[1] The prepared statement of Admiral Vanderwagen appears in the Appendix on page 34.

progress they have been making. I would report to you, sir, that I made numerous visits to States. I was in North Carolina last week and in North Carolina last year, they did 87 exercises involving about 7,000 people in preparing for a pandemic flu. So there is a great deal of activity that is going on at the community level where it really needs to be, particularly in a pandemic flu.

This really highlights, as you suggested, the shared responsibility that prevails, particularly as we look forward to future steps. Early in this course, the last year or two, the Federal Government and State Governments have been the lead players. Vaccine infrastructure development, anti-viral infrastructure development, expanded bed capacity, initial planning and training, these were all roles for the Federal and State Governments. The next steps will have to build on the successes, including anti-viral prophylaxis, but this will require wider application of shared responsibilities among businesses, the health care industry, individuals, and families.

There are new developments that need to be taken advantage of. We need a cheaper, less labor-intensive ventilator for the kind of respiratory support we may need. We need additional guidance—and we are working on these issues—additional guidance is needed for augmentation of community mitigation strategies using respiratory protection, such as M–95 respirators. The science doesn't give us a clear answer on many of these issues, but we will have to find solutions to these gaps and we will have to find them in concert with our State, local, business, and individual colleagues.

In summary, our office is functional. The Pandemic and All Hazards Preparedness Act is being implemented. Pan flu preparedness has moved along pretty smartly and we have made pretty good progress, not only in pan flu, but on a variety of hazards. Gaps still exist and additional steps will and must be taken, but they must be done in the context of shared responsibility. We will continue to consult with our State, local, business, and private sector partners as we develop actions to address this next set of gaps. Without that consultation, we will not have an effective plan and a comprehensive capability to respond when the Nation needs us.

I thank you for the opportunity to be here today.

Senator PRYOR. Thank you. Dr. Jolly.

TESTIMONY OF B. TILMAN JOLLY, M.D.,[1] ASSOCIATE CHIEF MEDICAL OFFICER FOR MEDICAL READINESS, OFFICE OF HEALTH AFFAIRS, U.S. DEPARTMENT OF HOMELAND SECURITY

Dr. JOLLY. Mr. Chairman, thank you for the opportunity to testify before the Subcommittee today to discuss our efforts toward overall pandemic flu preparedness. Before I begin, I would like to take the opportunity to thank you and the Members of the full Committee on behalf of Secretary Chertoff for your continued willingness to work alongside the Department to provide leadership in protecting and ensuring the security of our homeland. I would also like to thank our partners at HHS and others with whom we work every day.

[1] The prepared statement of Dr. Jolly appears in the Appendix on page 49.

A pandemic is unique. It is likely to come in waves, passing through communities of all sizes across the Nation and the world simultaneously. But then it may last as long as 18 months. An unmitigated pandemic—and I emphasize unmitigated—could result in 200,000 to two million deaths in the United States, depending on its severity. Further, an influenza pandemic could have major impacts on society and the economy, including our Nation's critical infrastructure and key resources, as you have said, based on the illness and related absenteeism.

DHS has been and remains actively engaged with its Federal, State, local, territorial, tribal, and private sector partners alongside HHS to prepare our Nation and the international community for an influenza pandemic. As outlined in the implementation plan, DHS is responsible for the coordination of the overall domestic Federal response during an influenza pandemic, including implementing policies that facilitate compliance with recommended social distancing measures, developing a common operating fixture for all Federal departments and agencies, and ensuring the integrity of the Nation's infrastructure, domestic security, and entry and exit screening for influenza at our borders.

In working with our partners, such as HHS, the State Department, and USDA, DHS has developed and implemented a number of initiatives and outreach to support continuity of operations, planning for all levels of government and private sector entities. I will highlight a few noteworthy accomplishments and responsibilities under the implementation plan particular to DHS.

DHS produced and released the "Pandemic Influenza Preparedness, Response, and Recovery Guide for Critical Infrastructure and Key Resources." The Guide has served to support business and other private sector pandemic planning by complementing and enhancing but not replacing their existing continuity planning efforts. With that in mind, DHS and its partners developed the guide to assist businesses whose existing continuity plans generally do not include strategies to protect human health during emergencies like a pandemic. As a next step, DHS is currently leading the development of specific guides for each of the 17 critical infrastructure and key resource sectors using the security partnership model.

In coordination with other Federal departments and agencies, DHS is developing a coordinated government-wide planning forum. An initial analysis of the response requirements for Federal support has been completed. From this analysis, the national plan defining the Federal concept for coordinating response and recovery operations during a pandemic has been developed and will be undergoing interagency review. Utilizing this planning process, a coordinated Federal border management plan has been developed and is currently also under review. This process included a wide range of partners.

DHS has also conducted or participated in Federal and State interagency pandemic influenza exercises and held workshops and forums with critical infrastructure key resources owners and operators. Consistent with this role under Homeland Security Presidential Directive 5 (HSPD–5), as it is known, Secretary Chertoff pre-designated Vice Admiral Vivien Crea, Vice Commandant of the Coast Guard, as the National Principal Federal Official (PFO), for

pandemic influenza and has pre-designated five regional PFOs and 10 deputy PFOs. Likewise, our partners have pre-designated infrastructure liaisons, Federal coordinating officers, senior officials for health, as well as defense coordinating officers. Vice Admiral Crea and the regional PFOs have participated in multi-agency training and orientation sessions regarding preparedness duties. Additionally, the PFO teams have begun outreach both nationally and in their regions in advance of a more formalized exercise program which is being developed at DHS.

On an ongoing basis, DHS participates in interagency working groups to develop guidance, including community mitigation strategies, medical countermeasures, vaccine prioritization, and risk communication strategies.

In closing, significant progress has been made in national preparedness for pandemic influenza. DHS looks forward to continuing its partnership with the Federal interagency, State, local, tribal, territorial, and private sector stakeholders to complete the work of pandemic preparedness and to further the Nation's ability to prepare for, respond to, and recover from all hazards.

Thank you again for the opportunity to testify today on behalf of the Department of Homeland Security and I would be happy to answer any questions you might have.

Senator PRYOR. Thank you, and I appreciate again both of you being here and your testimony. We will submit your written testimony for the record.

Let me ask just on the front end about roles and responsibilities, basically who is in charge, and I guess the way I would—did you say that he is in charge? Is that what you are saying? [Laughter.]

That is like the old "Far Side" cartoon. But I guess what I might do is ask this of both of you, and if one wants to answer or one wants to add something to the other, that would be great.

There was a study done, an evaluation done by GAO not too long ago, of the Homeland Security Council's National Strategic and Pandemic Influenza Plan. Basically, it says that responsibilities in a crisis are split between HHS and DHS with HHS taking responsibility for health issues and DHS directing in "emergency situations." But since a pan flu crisis is both by definition, do you all feel comfortable that the two departments have worked it out in terms of that happens if a decision is made that we have a flu pandemic coming? Who wants to take that?

Dr. JOLLY. I will begin. I believe we both do feel comfortable and all of our teams feel comfortable. Pandemic influenza is unique, but in fact, every crisis has health implications and HHS has an important role to play in public health and medical response to almost any crisis you can name.

Under Homeland Security Presidential Directive 5 and under other authorities, the Secretary of Homeland Security is responsible for the overall incident coordination, and that is well accepted throughout the government, and the Secretary of Health and Human Services is responsible for the specific public health and medical responsibility, which is quite large in this situation.

Senator PRYOR. Do you want to add anything to that?

Admiral VANDERWAGEN. No, I would just affirm what he said. There are 15 useful emergency support functions. Health is one of

them. In this case, it has a big role. I think the health messaging and the health interventions and so on are our responsibility, but it is under the overarching direction of DHS.

Senator PRYOR. This same report I referred to a few moments ago talked about how there only has been one national multi-jurisdictional exercise as kind of a run through on our response, and as I understand it, I guess that was done before there was a National Response Plan. Do we have plans for further national or multi-jurisdictional exercises that would coordinate all the various levels and people that have to be coordinated?

Dr. JOLLY. We certainly do have plans for those and that report does discuss that exercise initially done. Since then, there have been a number of exercises at the State and local level and those are quite important to exercise those roles, and we do have ongoing plans in the coming months for exercises of our Principal Federal Official structure and the interagency structure and then the national structure. It is a complex set of exercises. I don't think that one exercise of the structure would do it, but a complex set, and yes, we will be advancing with those and HHS has also had exercises to inform that process.

Senator PRYOR. What is your time frame on doing those? Are you doing those now?

Dr. JOLLY. We are beginning the planning of those now. We have been working through—as I said in my testimony, one of the important things to develop those exercises is to develop strategic and then operational plans that you would then exercise rather than just designing the exercises off a scenario. And so those are being completed now and we hope that in the coming months—I don't have a specific date scheduled that I can announce, but we hope that in the coming months, we will start that process and build to an exercise that goes from the cabinet level down.

Senator PRYOR. OK. Let me also ask about something that is part of the nature of a pandemic flu epidemic. Generally when there is a national disaster or regional disaster, the Stafford Act gets triggered and States help neighboring States and there is often a regional approach. But I can see in a flu epidemic or pandemic where governors, for example, might be reluctant to send his or her people to a nearby State to help because they may be next, and plus they may be spreading the virus back and forth across State lines. So to me, that seems to be something that is—I don't know if I would say unique, but certainly a characteristic of a pandemic—a flu pandemic. How do you adjust your overall planning for that contingency, that this just behaves differently than most national disasters?

Admiral VANDERWAGEN. Well, let me speak to the health segment of that, and you may recall that Secretary Leavitt back in 2005 started—he went to every State for a summit on pan flu and his message was pretty much the same, and that is you need to be prepared to take care of yourself because the very circumstance you just described is highly likely.

So I think in our work with the States and localities, the notion here is how much capacity can we build locally and within a State in order to fill as many gaps as we can internally, not relying on the EMAC or the Federal system as a means to fill gaps. Very dif-

ficult, particularly if we are talking about facilities and personnel which will be in short supply in just about every location. But it is the best way we can plan, and that is try and build from the base of making the localities as self-sufficient as you can in the event.

Senator PRYOR. And do you feel like we are making progress along those lines?

Admiral VANDERWAGEN. Yes. What are some objective measures? The Medical Reserve Corps, which is a way of organizing community-based volunteers into identifiable teams, has expanded up to over 650 units and 120,000 individuals, and that is just one approach to organizing volunteers. States have local programs, as well. We are seeing a real increase in pre-identified volunteers with skill sets needed to fulfill roles that the States and localities have identified as being in need during an event like this.

Senator PRYOR. Let us stay with that general line of questioning—how a flu pandemic behaves and how it unfolds across the country. In this chart here,[1] the one with the black background, that is a scenario that the Los Alamos National Lab came up with where 10 avian flu individuals get off the plane at LAX, Los Angeles, and then you can see the sequence of how it spreads across the country and runs its course through the country. Do you all generally agree that is a realistic model? Does that model ring true to you, or is that fair?

Dr. JOLLY. I think it probably is fair. There are a lot of modelers who have done a lot of models based on where the first case is or where first clusters are and how it spreads, depending on the disease characteristics and travel characteristics and behavioral characteristics. I think that is a reasonable assumption of one possibility of a model and how a disease might spread that is largely based on history from 1918 and the other couple of pandemics of the last century.

Admiral VANDERWAGEN. Let me add one other comment to that.

Senator PRYOR. Yes, go ahead.

Admiral VANDERWAGEN. I think that is an unmitigated or unintervened-upon event that we see unfolding there, and again, the modelers, given this as the base, what can we do to intervene, the community mitigation strategies that were employed, for instance, by St. Louis in 1918——

Senator PRYOR. Where they basically quarantine the city and more or less quarantine——

Admiral VANDERWAGEN. Respiratory protection and slow down, get social distancing, and so on, they were able to reduce by 50 percent the number of cases and the mortality associated with it, and so the community mitigation strategies using fairly simple community social distancing practices, could give us—some people in the modeling world say as high as 70 percent. We operate on a more conservative notion that it will reduce it 50 percent, and that is without adding anti-viral prophylaxis and without really having a vaccine in play.

[1] The chart referred to appears in the Appendix on page 90.

Senator PRYOR. OK. So you are saying that HHS, DHS, State, and local people might take some steps to make sure that we don't see the rapid spread across the country?

Admiral VANDERWAGEN. Yes. That is the planning that most communities are doing, and in fact, now we are looking to invest in new vaccines, and we should make that investment here in the next month or two, that may reduce the production time from 20 weeks, which is the current production time for a vaccine, down to 8 weeks. So there are a number of strategies that technologies will allow us to bring into play so that we can put more tools in the hands of communities. If they use just the community mitigation without these other interventions, they will get a certain reduction. And as we are able to give them more tools, like faster turnaround on vaccine production, anti-virals for prophylaxis, we may be able to reduce the rate of this spread even more significantly.

Senator PRYOR. And let me ask this quickly about vaccines. I want to leave plenty of time for Senator Akaka to ask questions. But in terms of the vaccine, as I understand it, medically and scientifically, you need samples of the real strain, and so once you get those samples, then it is just going to take you some time in order to develop enough vaccine to get it out to the public. Is that right?

Admiral VANDERWAGEN. Yes. In the stockpile, we have a significant number of doses of pre-pandemic vaccine based on the current H5N1s that have been present in Asia. But you are absolutely right. If that is not the particular strain, we will have to produce a different vaccine and production time right now is about 20 weeks from identification of the specific virus to the time that you are in full production of a vaccine.

There are other things on the horizon that make this a very positive picture, and that is testing that currently shows that with adjuvants, that is things that augment the ability of the vaccine to increase your immune response, we may have 20-fold the amount of vaccine that we currently have in the stockpile by adding adjuvants to the existing vaccines, which would give us enough probably to cover everybody in the country if it was an H5N1 as we have developed the vaccine for at this point.

There are lots of technological activities that in the next year or two give us much hope that we can intervene and slow this thing down very dramatically.

Senator PRYOR. Let me ask one more question before I turn it over to Senator Akaka, and that is in terms of our health care infrastructure, when I see a map like that, I look at the Los Angeles area. To me, it seems the Los Angeles area medical infrastructure could be totally overwhelmed, whereas in other parts of the country, they are not feeling any stress from this at all. Is that part of our planning, to figure out how to allocate those resources nationally? Do you just have some concrete limitations on the number of hospital beds available? I guess part of the planning, I hope, would be figuring out other arrangements to take care of people outside of a hospital context, but also to bring in more medical professionals into that area. How is the planning going there? What are the recommendations there?

Admiral VANDERWAGEN. I think that States using the Hospital Preparedness Grants and their own funds—States have been in-

creasing their fiscal commitment to these activities as much as the Federal Government have—are investing in expanded bed capacity in the form of stand-up portable hospitals so that they have that mobility for a variety of events, but they can certainly use them within a pan flu environment. The limiting step in many of these things is going to be the number of people who are ill or not ill and are available in the community. If you have a 40 percent absentee rate, for instance, in health care workers, it is going to be tough for them to provide the care. That is where the volunteer workforce is being pre-identified.

Yes, where we see the cases coming early in the environment, and this is where many of these exercises are targeted, we are seeing it emerge in Location X. What can we bring to that particular fight? That is a high priority. Once it goes to a half-dozen or so communities, then we would probably back off with some of that extra push because then we are going to be looking at a broader-based problem. If we can slow it down in L.A., better for us. But if it is in 20 cities, well, it is already on the spread. Then we need to go to Plan B, which is the local capacity plan.

Dr. JOLLY. And I would add the key in this is really up front trying to reduce the burden on the health care system. The health care system is under stress now and would be under more stress, and the more we can employ community mitigation strategies broadly across the community very early, and the modeling shows that the key is doing it early when you can really make a difference to really reduce the load and spread out the load on the health care system to improve everyone's outcome.

Senator PRYOR. Does that also include the economic load? Have you thought about these hospitals, because they are going to treat people and if they are totally overwhelmed, and given the percentage of uninsured, etc., just special circumstances, is this going to financially, not ruin, but greatly burden our health care system?

Dr. JOLLY. I think there are a number of potential effects, economic being one, and supplies and others that are all part of the mix and they are part of the modeling and part of the exercises.

Admiral VANDERWAGEN. And this goes to how we work in sync. What Secretary Leavitt can do is declare a public health emergency behind Secretary Chertoff's leadership on the Incident of National Significance. If we declare a public health emergency, that sets in effect many waivers. That gives the hospitals many opportunities to take care of people and be reimbursed in ways they might not otherwise be reimbursed.

Second, hospitals that are part of the National Disaster Management System in disasters, if they are taking additional patient burdens, can get paid at about 115 percent of the existing Medicare rate. So that helps to over-compensate. And then there are always supplemental requests. In Hurricane Katrina, for instance, we had some additional funds identified to support the facilities in Louisiana and Mississippi that were under dire economic stress.

Senator PRYOR. Senator Akaka.

OPENING STATEMENT OF SENATOR AKAKA

Senator AKAKA. Thank you very much, Mr. Chairman. I am glad to be here with you and with our witnesses. You know that I share

your concerns about the possibility of pandemic influenza outbreak not only in our country but around the world, and also because of the prediction that was made by WHO in 2004 about the concern about A H5N1 outbreak and how deadly it would be and what a disaster that would be.

So I was glad to note that last month, the Department of Homeland Security conducted a National Preparedness Month campaign and 1,700 State and local-level organizations participated in that, and this week, Senator Pryor and I have had respective hearings in our Subcommittees on pandemic flu. So I am glad that we are giving it that kind of focus.

Admiral it is good to see you.

Admiral VANDERWAGEN. [In Hawaiian.]

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

Admiral VANDERWAGEN. Well, as you know, vaccines are produced, or they have to begin production about 6 months before the season actually arrives, and so the folks who are prognosticating these things, looking at the epidemiology, try and pick those virus strains that are most likely to appear. Sometimes you don't get absolutely the right one. One of the things that we are seeing in the Southern Hemisphere right now is a virus that we may not have full protection from. We think that the influenza viruses that we have will provide pretty good coverage for it, but we are seeing in the Southern Hemisphere a pretty tough influenza season.

As you know, in a routine year, 36,000 people die in the United States from this seasonal influenza. So while we worry about pandemics, seasonal influenza is not a white event, either.

Dr. JOLLY. If I could, I would add that some years are more closely matched than others, as a physician, in the influenza vaccine, but I think our major issue is to really get the word out and get people vaccinated who need to be vaccinated and have them—I believe we have 130 million doses available for this coming year, so our supply is good and our challenge is to get the public vaccinated early and aggressively.

Senator AKAKA. There is a big concern about whether we will be able to have the vaccine. Is there any concern that as avian flu attacks chickens and eggs, and I understand that the eggs play a part in this vaccine or are used to produce this vaccine, that these may be problems producing enough vaccine? Is that true?

Admiral VANDERWAGEN. Well, as you know, sir, we received in the supplemental about $5.6 billion. We have invested about $3.2 billion of that already and much of that has gone into helping companies convert from egg-based to cell-based technologies. I think we have five or so manufacturers now that are converting over to cell-based production capability, and that would be useful both for seasonal flu, but also in a pandemic event. That is one of the major investments. Our next investment, we are trying to target a recombinant vaccine that will shorten the production time by half, at

least it appears that it will do that based on European studies. So we are trying to get around this egg-based older approach to vaccine production.

Dr. JOLLY. I would add that our poultry industry has taken great strides toward biosecurity in general and this subset of the industry that produces these eggs is a very secure subset and that is a key part of keeping that supply open.

Senator AKAKA. Admiral and Dr. Jolly, HHS and DHS are the Federal leaders in pandemic emergency response, but GAO recently testified that their respective roles haven't been clarified. Have HHS and DHS communicated to the State and local jurisdictions around the country the roles and responsibilities of each agency?

Dr. JOLLY. As we have stated in the prior hearing, I think, when GAO was there and also in our statements, there is a fairly clear—a very clear delineation of roles of HHS as the manager of the overall incident, and that is being manifested in all of our interactions with the States and also through the work of our Principal Federal Official group and their support group as they move throughout the States and regions. That leaves HHS with a large role of managing emergency support function, the public health and medical.

Senator AKAKA. Admiral, do you want to comment?

Admiral VANDERWAGEN. I fully agree. I think we have worked very closely with Admiral Crea as she has tried to develop the DHS overarching response capability and we nestle into that with our health piece. But she has got a broader responsibility—public safety, transportation, energy, etc. Our's is the health link.

Senator AKAKA. Admiral, you mentioned that the current flu vaccine may not give us sufficient protection this season. If this is the case, have you made any new predictions about the number of possible fatalities this season?

Admiral VANDERWAGEN. I don't have any epidemiologic projections of any change in our seasonal usual. We have seen some different behavior, some increased infectivity in the Southern Hemisphere and we will just kind of have to see how that projects into our population.

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

Admiral VANDERWAGEN. [In Hawaiian.] I couldn't answer specifically with Hawaii. I can get that for the record for you, sir. I didn't do my full homework, I guess.

I think that where we are—you may recall that the acquisition of anti-virals, the strategy was to purchase enough anti-virals, and at the time that the strategy was marked out they were only producing 15 million regimens a year, so the notion was, let us buy enough to treat the percentage of people we think may get infected, not prophylaxis, treatment. We have purchased on plan in 2007 about 37 million treatment courses and the States have purchased about 15 million. We were on plan to purchase the balance up to

a total of 81 million treatment courses by the end of 2008, and we are on plan to get that done. I think we are making good progress.

Our other investments, as I spoke to you, are about increasing our vaccine production capability, looking for alternatives to the existing anti-virals so that if we develop resistance, we have another drug to work with, diagnostics so that we can determine is it just seasonal flu or is it an avian flu. Those investments have gone a long way to building an infrastructural base that gives us more options in the future.

Senator AKAKA. Thank you so much for your responses.

Senator PRYOR. Thank you, Senator Akaka. We appreciate your time on this.

Let me follow up, if I may, with you, Admiral, about something we got into just a few minutes ago and that is the vaccine. I would like your comments on the World Health Organization report that says that worldwide production capability for pandemic flu vaccine would be 1.2 million doses total. I am wondering if that is consistent with your understanding or if you think that there is more worldwide capacity than that.

Admiral VANDERWAGEN. I think there is much more capacity than that. We have taken delivery this year alone into the stockpile something on the order of magnitude of about 15 million doses of vaccine. So just for our purchases alone, we are purchasing a lot more than that.

Senator PRYOR. I was going to ask you that, because you mentioned the stockpile a few moments ago and I think you mentioned that you had some stockpile of the flu that you have seen mostly in Asia that you are already stockpiling. Tell me about our stockpiles. What is the shelf life of the vaccine? How long can we stockpile them before we have to replenish? If you don't mind, give us the status of our stockpile.

Admiral VANDERWAGEN. Sure. With regards to vaccines, and now I am talking about a pre-pandemic vaccine, H5N1——

Senator PRYOR. Right.

Admiral VANDERWAGEN [continuing.] There are two or three different varieties of that that have been identified in South Asia, Indonesia and Vietnam. We have about 26 million doses. By the end of this calendar year, we will have 26 million doses of vaccine based on those viruses. They have about a 3-year shelf life to them. It is just biologicals. They only last for a fixed period of time, which leads to the question about sustainability that I think, over time, this is going to be the issue that we are all going to have to confront, State, local, Federal, is how will we sustain some of these investments that we have made when they run out of shelf life or the equipment becomes obsolete, etc.

I have mentioned to you the 37.5 million doses of anti-virals that we have. We will purchase another 13 million or so up to 50 million on the Federal side. The States have 15 million. They will purchase another 3 to 4 million to meet that treatment goal. Right now, we are entertaining, with the production capability that the anti-viral manufacturers have for Relenza and Tamiflu, should we consider the use of these in a prophylactic way, that is for people who are in high-risk work environments—hospital workers. We know from

seasonal flu that 15 to 30 percent of health care workers in hospitals that have influenza load will get sick.

Should we be using anti-virals for prophylaxis for those kind of folks, people who are home taking care of somebody with pan flu? Should we recommend using the anti-virals in a prophylactic mode there? That will have implications for acquisition, purchasing, and is that a local responsibility? Is it an individual responsibility? Is it a business responsibility? These are some of the issues that we are working through right now with our stakeholders.

Senator PRYOR. And you also hinted—maybe I misunderstood what you said earlier, but maybe hinted that you were looking at ways to have a larger capacity. I read something recently about maybe retrofitting some domestic production plants. Could you give us a status report——

Admiral VANDERWAGEN. Production capacity, I spoke to adjuvants, and I will come back to that in just a minute, but production capacity has expanded significantly with the investments we have been able to make with the $6 billion that Congress gave us. That has been a major part of our investment. We have put about $133 million into facilities retrofitting. We have put about $10 million into international vaccine production.

Antigen spearing, which is what I mentioned earlier, antigen is the part of the virus that is in the vaccine that stimulates your immune system. These antigen spearing agents, when added to the vaccine, may make that vaccine more potent, in effect reducing. Right now, it takes 90 micrograms to get a good response when we give the vaccine, but these adjuvants, some of them have demonstrated efficacy down to three micrograms. We are not betting on three micrograms, but if it gets us a 10- or a 20-fold increase, down to 15, 20 micrograms, or below that, we are going to have a lot more vaccine available to us fairly quickly just by adding these adjuvants. Those are in clinical trials right now to establish their safety and their efficacy.

Senator PRYOR. On the vaccines, what is the criteria that HHS uses to decide which producers receive vaccine production contracts? Are you limited based on patents and brand names, what is out there, or are these more like generics that it is a competitive bid? How does that process work?

Admiral VANDERWAGEN. Our basic criterion is very simple. We want U.S.-licensed manufacturers because we want domestic production capability. We have five or six firms in the hunt. They have different approaches and so on, but we believe that by building the infrastructural base across the market base, we are doing a better job of assuring that we have the domestic production capability that we may need in this event rather than relying on international suppliers.

Senator PRYOR. And the last thing on that is we have a certain stockpile. Are we planning on, assuming we have a pandemic like the chart shows there, being able to go out and get quite a bit more in a very rapid fashion, and if that is the plan, are we doing advance pricing contracts or are we working with the manufacturers to be ready in the event that terrible day comes?

Admiral VANDERWAGEN. Well, the material is plentiful and we have recently conducted some gap analysis and we don't believe

that—some of the industries don't have any further production capacity available to them and we are going to have to work out how we could expand their production capacity if they are going to provide a surge product in high demand. That would include such things as M–95 respirators. Other products rely heavily on offshore raw materials. They may have production capacity domestically, but they have offshore materials supplies. This gets to be a pretty complex market analysis and will take continued dialogue with our industry partners to achieve reasonable solutions. We are trying to prioritize it against the highest priority demands, such as ventilators and other respiratory care materials.

Senator PRYOR. Senator Sununu, did you have any questions of this panel?

OPENING STATEMENT OF SENATOR SUNUNU

Senator SUNUNU. No, I don't. I just appreciate the testimony. Sorry to have arrived a little bit late. I will submit a written introductory statement for the record, but I want to give an opportunity for all the panelists to have some time, so I thank you, Mr. Chairman, and thank both of our witnesses on the first panel.

[The prepared statement of Senator Sununu follows:]

PREPARED STATEMENT OF SENATOR SUNUNU

Good afternoon. I would like to thank all of the witnesses who have agreed to testify before today's hearing, and would especially like to thank Homeland Security and Emergency Management Director Christopher Pope from my home State of New Hampshire who will provide testimony on our second panel.

Director Pope came up through the ranks in the Concord, NH fire department having served as a Firefighter, Paramedic, Lieutenant, Acting Captain, Battalion Chief, and Division Commander before becoming Chief. As Chief, Director Pope was responsible for 117 employees and a regional dispatch enter that handled 20,000 emergency calls per year. Additionally, he developed the Emergency Management Master Plan for Concord. Director Pope's strong background in public safety administration and emergency management is an asset to New Hampshire and I am pleased that he could be with us today.

This afternoon, this Subcommittee looks into the issue of Pandemic Influenza Preparedness at the State and Local level. While we know that we can never be truly prepared for a pandemic outbreak, it is important that our State and local partners have the resources they need from the Federal Government to be ready. This hearing is an important step in opening those lines of communication. I look forward to hearing from both our Federal and State partners.

Senator PRYOR. I want to thank both of you for being here. We may submit some written questions and we will leave our record open for a little while in order to do that back and forth. Thank you.

Admiral VANDERWAGEN. The dialogue is absolutely necessary, Mr. Chairman. We have a challenge together to meet the Nation's needs. Thank you for your interest.

Senator PRYOR. Thank you.

As the first panel is leaving, I will ask the second panel to come forward. Let me go ahead and introduce them. First, we will hear from Dr. Paul Halverson, Director of Health for the Arkansas Department of Health and State Health Officer. Dr. Halverson has an extensive background in public health, having served as a member of the Senior Biomedical Research Service at the Centers for Disease Control and also as the Director of the Division of Public Health Systems Development and Research.

Next, we will have Christopher Pope, the Director of Homeland Security and Emergency Management for the New Hampshire Department of Safety. He has a solid background in public safety administration and emergency management. He served as the fire chief there in Concord and he has developed an emergency management master plan. As a former fire chief, he brings a unique perspective on the role of first responders in a health crisis.

And our third panelist will be Yvonne Madlock, Director of the Memphis and Shelby County Health Department and a Board member of the National Association for County and City Health Officials. She has a strong background in public health, particularly in dealing with issues at the local and county level.

Dr. Halverson, welcome, and if you want to give your opening statement. Thank you.

TESTIMONY OF PAUL K. HALVERSON, DrPH, MHSA, FACHE,[1] DIRECTOR AND STATE HEALTH OFFICER, ARKANSAS DEPARTMENT OF HEALTH

Dr. HALVERSON. Thank you, Senator, and thank you, Senator Pryor and Senator Sununu for the invitation to appear today. This is a very important time, I think, for our State and also our Nation as we work together in putting together a plan and to exercise that plan in preparation for a pandemic.

As Senator Pryor mentioned, I serve as a member of Governor Beebe's cabinet and am responsible for public health in Arkansas. We have nearly 5,000 employees and contractors in 95 local offices and in 75 counties in Arkansas. The Arkansas Department of Emergency Management has the primary responsibility for emergency response generally, but the governor has designated the Arkansas Department of Health to have lead responsibility for pandemic influenza preparedness and response.

Arkansas is a great small State with approximately 2.8 million people. We have six metropolitan areas with a population of over 55,000, but the majority of our State is a collection of small towns and villages. Although we are home to Wal-Mart, the largest retailer in the world, approximately one-third of our workforce is employed by small business. Most small businesses cannot withstand the impact of lost workers and the workers cannot afford to miss work. We have 84 hospitals that are part of our Hospital Preparedness Program and 10,897 licensed beds and approximately 2,000 active physicians. According to the CDC-anticipated attack rate of around 35 percent, we would have over 500,000 people clinically ill, over 11,000 hospitalized, and over 3,500 people would die in the event of a pandemic that is being forecasted.

One of the biggest challenges facing our State is the ability to sustain basic needs, such as electricity, food, water, and other services during an emergency because many of our smaller communities lack the resources and manpower to support these services. Federal funding and guidance have provided our State with the ability to provide critical infrastructure and make extensive progress in preparedness efforts in our State. We have taken an early proactive position in regard to pandemic preparedness, enact-

[1] The prepared statement of Mr. Halverson appears in the Appendix on page 56.

ing planning strategies designed to protect Arkansans from any threats to public health, really an all-hazards approach from the public health perspective.

Hurricane Katrina was an example of our ability to respond to over 75,000 evacuees that came to our State, and we believe because of our preparedness, we were able to meet the challenge of that great influx of individuals.

We have conducted 233 pandemic briefings and over 97 exercises, working with over 9,000 people in Arkansas, including county, State, and our work with CDC. We are working closely with State and county government organizations, first responders, police, sheriffs, hospitals, and a variety of private sector partners. Partnership really is the key. It will allow us to be successful as we work together to make the most of our resources.

With the support of our legislature, we have been able to purchase our maximum allotment of anti-virals and personal protective equipment. We convened an expert panel on recommendations regarding priority use of anti-virals and vaccine when it becomes available. We have worked to develop a medical reserve corps with volunteer physicians and nurses and other health professionals and our state-of-the-art laboratory has been designated by CDC for testing avian flu.

Surveillance really is very critical in our State and every State and we work very closely with the CDC as well as sentinel sites and physicians in the monitoring of Medicaid claims data as a part of our approach towards surveillance.

There are a number of things that we have done to respond, including mass flu vaccination campaigns, and we will again this year be working to try to exercise those plans and believe that the whole idea of exercising is critical to our success.

We have also focused on special populations with physical disabilities and partnered with the Governor's Commission on People with Disabilities and the Arkansas Association of the Deaf, and we are developing a List Serve for our deaf population, 60 to 80 percent of whom use Blackberries and cellular telephones to communicate.

There are a number of issues, and I will talk about those briefly. Our hospitals in Arkansas have worked carefully with the Department to address issues around capacity, but we really do need to focus on our ability to be prepared in terms of not just the materials, but the people necessary to achieve that. In our urban areas in particular, we have shared staffing that really needs to be sorted out because people who will work in multiple facilities will only be able to work in one generally and we need to work in terms of that.

Funding is also very important to us. In a small State like Arkansas, it is critical to have stable and sustainable funding.

And last, let me just mention that, again, our working together in partnership with State, Federal, and county governments is really crucial to our continued success.

Thank you so much and I appreciate the opportunity to be here this morning.

Senator PRYOR. Thank you. Mr. Pope.

TESTIMONY OF CHRISTOPHER M. POPE,[1] DIRECTOR, HOMELAND SECURITY AND EMERGENCY MANAGEMENT, STATE OF NEW HAMPSHIRE

Mr. POPE. Good afternoon, Mr. Chairman, Senator Sununu. My name is Christopher Pope and I do serve as the Director of Homeland Security and Emergency Management in the State of New Hampshire. I was appointed by Governor Lynch just over a year ago following a 30-year career in the fire service, functioning as a local responder both in EMS and fire and hazardous materials response.

Each State has characteristics which make it unique in terms of pandemic planning. I wish to point out a few of these unique factors about New Hampshire which impact our public health and our all-hazard planning efforts.

First, while New Hampshire is small geographically, it sits in a compact region of States in the Northeast. The cities of New York, Boston, Hartford, Providence, Portland, Albany, and Montreal all exist within a shorter driving distance from New Hampshire's Emergency Operations Center than the distance separating Los Angeles from San Francisco. This means that evacuation surge secondary to any natural or human-caused disaster in this densely-populated region will significantly impact our State.

Second, we share a border with Canada, which is important both due to the potential of the illegal entry of those intent on committing harm, but also because local citizens routinely cross the border every day to conduct business. As we all know, State and foreign borders do not stop floods, terrorist events, or pandemics.

Third, Portsmouth, New Hampshire is an active seaport with significant critical infrastructure that supports not just the economy of the State, but that of the entire region.

Fourth, New Hampshire is a major tourist destination in all four seasons of the year.

And finally, New Hampshire has a very small county government presence within the State. There are no county emergency management directors. There are no county public health officials or county emergency operations centers. Prior to recent pandemic planning initiatives, all 234 communities within our State reported to one central government agency on all matters related to natural disasters and public health crises.

These unique factors have caused New Hampshire to take a slightly different approach to public health planning and response. For example, a Memorandum of Understanding was signed between the New Hampshire Department of Safety and the New Hampshire Department of Health and Human Services to allow collaboration in the area of emergency preparedness by actually embedding Department of Health and Human Services staff in the Division of Homeland Security and Emergency Management. Our bioterrorism unit exists within the Department of Safety rather than within our Department of Health and Human Services. This forces these two key State agencies to work closely together, thus building a strong partnership.

[1] The prepared statement of Mr. Pope appears in the Appendix on page 66.

The Director of Public Health, the State epidemiologist, the chief of our public health lab, our grants manager, our bioterrorism chief, and I, along with several other staff, meet twice per month to review public health planning efforts and further our strategic planning.

Because of the lack of a county public health structure, it became evident for the need to develop a regional approach to respond to a pandemic. Thus, New Hampshire developed 19 what we refer to as All-Health Hazard Regions (AHHR) covering all 234 of our communities. As of late summer, 14 AHHRs had completed a pandemic influenza annex to their all-hazard public health plan, with the remaining five nearing completion. The AHHRs have identified acute care centers, neighborhood emergency health centers, point of dispensing distribution centers, and mass quarantine centers, and they have already developed or are in the process of developing plans on how these would be operationalized.

All 19 AHHRs have conducted tabletop exercises of their all-health hazards plan for public health response. Pandemic Phase 1 and 2 funds were distributed to AHHRs to support enhanced regional response plans, including community medical surge. These efforts have increased the capability and capacity of the health care system with these regions. Several of these regions have purchased medical supplies to support acute care centers to reduce the likelihood that hospitals will be expected to provide them. Because of the number of exercises that have occurred, community-based partners and health care system partners have demonstrated they have a better understanding of the real capacity of hospitals.

My submitted written testimony details a list of cross-cutting lessons learned from the many exercises conducted in New Hampshire. It further lists a large number of accomplishments subsequent to these exercises. It also delves into details related to our building of interstate and international regionalization initiatives. Two I will mention quickly.

The Northeast States Emergency Consortium (NESEC), is a group of the six New England emergency management directors and those from New York and New Jersey cooperatively working to deal with emergency management issues and now public health-related issues, as well.

The second group, International Emergency Management Group (IEMG), exists with those same States and our friends in the Eastern Provinces, including Quebec, New Brunswick, Nova Scotia, Prince Edward Island, Labrador, and Newfoundland.

I would like to briefly relate to you some feedback that we have received from our State partners and our local communities in terms of what the Federal Government, and State Government, for that matter, working together can do to improve our efforts.

One, the need to support for small towns to update and develop their local emergency operations plan, either directly to the community for hiring of a consultant or other staff member, and to require the plans be all-hazard.

Earmarked funding for disability agencies and organizations to participate in planning and exercises. For example, interpreters for the deaf and hard of hearing individuals to participate in a 90-minute planning meeting can cost between $200 and $250.

Cooperative funding between DHHS and Homeland Security to fund Points of Distribution where communities share a border with other States or Canada. It is difficult to prepare a plan and fund for POD activations without these cross-border fundings.

These are but four of many recommendations that we have and many I have submitted as part of my written testimony.

Finally, I would say that local government, States, and the private sector have made great strides in their preparedness and response capabilities in public health crises. However, we are still not at the acceptable level of readiness that our citizens expect and deserve. States and local governments continue to need funding and leadership from the Federal Government as we continue to build these capabilities.

I wish to thank the Members of this Committee for inviting me here today to report these findings and I also wish to publicly thank the many local public health and emergency management officials who provided me with input for this report. Together, we commit to you to continue to knock down the stovepipes and continue to foster a cooperative environment between the myriad public and private entities that will be called upon to serve our citizens in times of disaster. Thank you very much.

Senator PRYOR. Thank you. Ms. Madlock.

TESTIMONY OF YVONNE S. MADLOCK, MAT,[1] DIRECTOR, MEMPHIS AND SHELBY COUNTY HEALTH DEPARTMENT, MEMPHIS, TENNESSEE, ON BEHALF OF THE NATIONAL ASSOCIATION FOR COUNTY AND CITY HEALTH OFFICIALS

Ms. MADLOCK. Good afternoon, Senator Pryor and Senator Sununu. On behalf of the citizens of Memphis and Shelby County and on behalf of local public health agencies across the United States, I appreciate the opportunity to come and share with you some comments on the state of pan flu preparedness at the public health level, local level, across the Nation.

My name is Yvonne Madlock. I am Director of Memphis and Shelby County Health Department and I have worked there for the last 12 years. Along with my staff, I have been deeply engaged in pandemic flu preparedness planning activities.

As a part of our work, we have had an increasing number of opportunities over the last several years to work closely with our colleagues throughout the Mid-South Region and particularly with our colleagues in Arkansas. I would like to tell you about the successes we have had as we have prepared our community and our region for what we perceive to be the inevitability of pandemic influenza.

We believe we have done a good job in coordinating with Federal, State, and community entities in developing a strong and comprehensive local plan for pandemic response, and I would believe that most local public health departments have had similar experiences. Key to our success in coordinating has been our ability to bring elected officials, key community leaders, and stakeholders together to learn and engage in pandemic flu planning.

More specifically, we have established 20 Points of Distribution, what we call PODs, and the mechanisms for distributing and ad-

[1] The prepared statement of Ms. Madlock appears in the Appendix on page 75.

ministering vaccines and medications to a large population, in our case, an MSA of more than 1.2 million people in just a few days. This spring, we had a great turnout in learning from our pan flu exercise, where more than 86 persons from across the region representing public health, local elected officials, police and fire and emergency medical services, public schools and college, the airport authority, and community organizations and businesses.

The following is a list of some of the things that we learned as a result of those experiences. First, we learned there is still work to be done in the area of public education. As Senator Pryor referenced earlier, many people are either under-informed or misinformed about the reality and the threat of flu and the need to plan for self-sufficiency. Delivering this message is challenging, particularly in this age of short attention spans when headlines compete for our attention moment by moment.

Second, we are very concerned about business continuity planning. Pandemics are not like hurricanes or tornadoes. They are not a single incident that happens over the course of a few hours or even a few days. Sustaining life as we know it and its necessary business processes over weeks, months, and maybe even years with a shrunken workforce is one of the major challenges and consequences of pandemic flu that we all face and that I believe has not yet been adequately addressed.

Third, the exercise emphasized for us the distinct role of local responders. For instance, the Strategic National Stockpile is a Federal and State resource, but its deployment will be a local responsibility. Memphis and Shelby County residents will look to the local health department and to local government to distribute vaccines and medications in a quick and efficient manner. They will look to us for specifics on the epidemic in our community, where to go for assistance, and how to protect themselves and their families.

All disasters are local and response is dependent upon the knowledge, the skills, the resources of local responders representing multiple disciplines. But local does not mean isolated. Regionalism in planning is critical. Disasters, whether manmade or naturally occurring, do not respect political or geographic boundaries. National policies and guidance, written into funding opportunities that encourages and supports multi-State planning, minimalizing credentialing challenges, encouraging inter-governmental agreements, would be very helpful.

For example, Memphis is located in the extreme Southwest corner of Tennessee and really serves as the metropolitan hub of a three-State region, a mostly rural set of counties that surround us for almost 120 miles in either direction. So in terms of disaster planning, as Memphis goes, so goes the multi-State region that surrounds us. Adequate cross-jurisdictional planning can mean the difference in our ability to immunize our MSA in 48 hours or not.

At the local level, our uniform public safety partners have learned the value of public health in protecting communities in emergencies. We need to translate those lessons learned locally to the Federal level. The Federal Government can help by insisting that local public health be at the table at the local, State, and Federal levels as planning is done and funding allocations are made.

Again, I thank you very much for the opportunity to come before you today and for your interest in this very important issue to the health of all of our Nation.

Senator PRYOR. Thank you. What I would like to do is go ahead and lead off with a few questions, then turn it over to Senator Sununu. It looks like we may have a vote here in the next 10 or 15 minutes, but we will just play it by ear and see how it goes.

The first thing I have for all three of you is just a general statement on the working relationship that you all have with the Federal Government. Is there sufficient two-way communication between your offices and the Federal Government? Is the Federal Government providing resources and accessibility on a variety of fronts? Dr. Halverson.

Dr. HALVERSON. I appreciate the question because I think it really is important. As we talked about earlier, this is about a partnership and if the partnership is not effective, our response will not be, either. And I think, at least from Arkansas's perspective, we have a very positive relationship between the Department of Health and the Department of Health and Human Services and CDC in particular.

One of the things that CDC has done specifically to address this issue is the development of what is called the Senior Management Official. That is an individual from the Director's Office at CDC who works in Arkansas on our executive staff and provides a responsibility as a liaison. That has been incredibly important to us as we have been able to use that individual to work with us to address issues that we have from time to time.

The issue of Homeland Security, I think, and the Department of Homeland Security is a relatively new partner for us. We did attend a briefing recently that described the partnership between the Department of Homeland Security and HHS and the State and local health departments and how it will work. Frankly, it is too early to tell. This is really about relationships and I think that our strong working relationship and history with HHS has been very positive. I have a lot of hope for what could be a strong partnership with the Department of Homeland Security, but we really need to work that out and develop those relationships, as well.

Senator PRYOR. Mr. Pope.

Mr. POPE. I would certainly echo Dr. Halverson's comment. And frankly, it is refreshing to see people at the Federal level who work as hard and just are as dedicated as we sense these folks are, and there is nothing that if you could not in some way add an additional 10 or 20 hours to each day, I don't think there are any problems we couldn't overcome.

One other comment that I would make is that States and local governments tend to get a little bit frustrated with short deadlines, quick turnaround times that are imposed upon us by the Federal Government in order to comply with certain grant requirements. That is a controversial issue at times, but I will say that it is my opinion that it is those deadlines which will—it needs to be a balance, but it is those deadlines that keeps us making progress.

Senator PRYOR. Good.

Ms. MADLOCK. Thank you. I would say that the relationship as I perceive it between the Tennessee Department of Health and the

Federal level in the health sector is a very strong one. Ours at the local level is a bit more by proxy and a bit more indirect. But we do have a growing strength in that relationship, and I think overtures and recognition of the importance of direct communication between the Federal level and the local level is absolutely growing.

On the flip side, when we go to Homeland Security, that represents for us a new construct also and we really are working in two different organizational constructs. While we have a very well developed, historically developed State structure for public health, the emerging structure for Homeland Security is a new one and we are working with different regions, different counties comprising those regions, and beginning to learn one another, so that the opportunities, I think, ultimately will be there for us to communicate a lot more with Homeland Security at the local level than has emerged or has grown or evolved to exist thus far directly with the Department of Health and Human Services.

So it is a set of relationships that are different depending upon the office we are working with and they are in different States of evolution. But again, I think meetings like this and other opportunities we have had bode well for the potential for us to strengthen those relationships. I think everyone wants that to happen and I think we all recognize that is a critical element of success of planning.

Senator PRYOR. Well, thank you for those answers. One of the reasons I asked is because the two witnesses from the previous panel stayed here to listen to what you all had to say, and that is a good indicator to me that they are listening and they are working with you. As Senator Sununu will tell you, that is not always the case. A lot of times, the one panel will just leave the room, but I am so pleased that the previous panel stayed here to listen to what our local people have to say.

At this point, I am going to turn it over to Senator Sununu for his questions and I will have a few follow-ups. Thank you.

Senator SUNUNU. It is possible, Mr. Chairman, that they saw your question and super simply were well prepared, but somehow, I think that is probably not the case, having spent time with Chris Pope and others who have been working on these issues. I do get the sense that, partly because of the priority Congress has made, but I think because of the dedication of people at the local level, there is a good channel of communication.

I want to begin by asking Chris Pope about that regional communication and regional coordination. You mentioned New Hampshire's involvement with the Northeastern States Consortium to help facilitate a better regional approach. Can you give some specific examples of how that regional approach has had an impact on New Hampshire?

Mr. POPE. Sure. Well, a practical example that I can give you is in a non-public health scenario where we had an ice storm, a severe ice storm in the Northeast that affected New Hampshire, Vermont, Maine. I had tens of thousands of citizens without power for more than a week, and there is a very specific need to get a very basic line, electric company line truck from the Eastern Canadian Provinces into New Hampshire, Vermont, and Maine to help local utility crews restore power. It is part of a mutual aid agree-

ment, and without agreements and conversation and planning ahead of time, those line trucks will sit at a border because of credible homeland security concerns and not get into the country as quickly as they are needed.

So you meet ahead of time, you identify issues, you conduct tabletop exercises, and you exchange business cards before a disaster occurs, and this has been incredibly valuable.

Senator SUNUNU. Why is it important to be part of that Northeastern Consortium even as you have the FEMA Region 1 structure in place on top of it?

Mr. POPE. Well, simply because we as the regional, either the directors of the Eastern Canadian Provinces or the directors in the New England Northeast States, we are driving our agenda. FEMA is not driving our agenda. And by the way, we attend meetings called by FEMA Region 1. We have got a terrific working relationship with FEMA Region 1.

But there are times when we need to meet where we are in control of our own agenda, we are talking about the issues that are germane to us, and I think—and FEMA attends our meetings, as well, as does DHS. So this has been a positive, very positive thing. And by the way, we have had visitors from the Southern U.S. border attend these meetings and interest from, for example, Guam, who wants to build a similar relationship with Japan, who would be their primary help in a disaster.

Senator SUNUNU. Dr. Halverson, you mentioned 96 exercises that you have participated in. Have any of those extended into a regional approach, and what are some of the key findings or experiences that have come out of those exercises for you?

Dr. HALVERSON. Well, we do an awful lot on a regional basis, and in particular as we think about some of our border States between Tennessee and Texas. We have taken a little bit different approach in the issues related to pandemic, however, with guidance from CDC and the Department of Homeland Security and Health. The issue here is that in the event of pandemic, we really need to be planning what we can do as a State and not—and frankly, it is a very difficult thing for us because it is our standard operating procedure to work together on a regional basis to create and share resources.

In this instance, we certainly are aware of what is occurring, particularly in Texarkana, Texas, and Texas, and in Memphis, West Memphis, and in those areas. We do the planning, but we also are very deliberate in some of our work with pandemic to be thinking about what are we going to be doing collectively within the State. So our emphasis really has been on a State level.

Now, from the perspective of counties, we are working together, and we do an awful lot of work sharing between counties within the State of Arkansas and we have a very established regional approach within our State, sharing resources, both people and material, to be able to work together in that regard.

So again, for us, we do both regional approach but also be thinking about what we have to do on our own.

Senator SUNUNU. Ms. Madlock, I have heard a lot of concerns about a lack of surge capacity within our health care system. Is this an issue in Memphis and Shelby, and what is being done or

what might be done to deal with a lack of surge capacity in the event of a pandemic?

Ms. MADLOCK. I would say I think the information you have heard, sir, is absolutely correct. I think the reality for most health care systems across the United States, and it is certainly true in Memphis and Shelby County, is that it is working at capacity right now. We have limited bed capacity in our community.

One of the things we realize is that we probably could never build and create the full amount of beds and support services that would be available to medically respond to a pandemic as you see depicted here. And so one of the things we obviously try to do is to create strategies that will provide us distance of time and the luxury of time so that we can minimize that medical impact as much as possible.

But in addition, we are working—we have a Medical Reserve Corps in Memphis and Shelby County. I know that they exist throughout the United States and I think they create great opportunities for bringing in folks to work in non-traditional roles that they may not assume on a regular day-to-day basis so that they can aid the effort as much as possible.

So I think there are different approaches to responding to that, whether it is to build capacity through the use of volunteers, whether it is work to maximize the relationships of hospitals and health care systems across regions, and we are working to do that also, working with 19 hospitals in our region to try and identify capacities of both equipment, beds, workforce, etc., or to develop strategies of intervention so that we can minimize the demand to the extent that we possibly can.

Senator SUNUNU. Director Pope, have New Hampshire hospitals taken a similar approach, a slightly different approach to dealing with the question of surge capacity?

Mr. POPE. Our plan for the most part, and I am going to oversimplify it, but it is essentially not to rely on the hospitals for any kind of surge capacity for the same reasons that were very well enunciated by Ms. Madlock. We have asked our 19 AHHRs to go out, identify facilities in their communities that meet certain requirements, characteristics, that could function in an infrastructure capacity as an acute care center, as a help center, or any of the other, a POD, and we have actually started to exercise these locations as the operational plans are being built out.

Senator SUNUNU. One of the things you mentioned in your testimony that would be of value that the Federal Government could provide is cooperative funding between DHS and DHHS to support Point of Distribution centers for communities that border other States, or in the case of New Hampshire, other countries like Canada. Has the Northern States Consortium or the International Emergency Management Group reached out to DHS and DHHS and how have they responded?

Mr. POPE. That is the direction we have taken, and more specifically the issue becomes, and I will give you a very quick specific example. On the Western border of New Hampshire, where we border Vermont, we have major medical centers, including Dartmouth-Hitchcock on the Western part of the State. So you will see people from Vermont coming in on an every day basis to seek medical

care, doctors' offices, into New Hampshire. And that is unique compared to what might happen on the Eastern border of our State with Maine, where we may actually have people from New Hampshire going into Maine to normally seek medical care.

So the issues are a little bit different, but the problem we run into is we can't take Federal—we have had difficulty in trying to fund exercises where it appears in any way, shape, or form that the funds are going towards some activity or benefit in another State. So we have had some challenges there and we have asked NESEC to look into that with FEMA and DHHS/CDC.

Senator SUNUNU. Thank you. Thank you, Mr. Chairman.

Senator PRYOR. Thank you. Dr. Halverson, you mentioned in your opening statement about non-medical containment exercise. Could you tell me what that is, why you did it, and what were some of the lessons?

Dr. HALVERSON. Well, again, our issue, Senator, is that, as Dr. Vanderwagen testified earlier, the issue early on is to slow down the spread of this disease, and frankly, issues around social distancing, the limiting of large crowds, the early use of social distancing and limited quarantine, we think are really important. They relate to our ability to more effectively manage the spread of disease. So it really has been our focus to try to create an interest not just in the use of the anti-virals or the vaccine, but practical issues that individuals could take to try to minimize their risk and contain the exposure.

Senator PRYOR. Let me ask you, Ms. Madlock, about Memphis. We have seen this chart here with the map of the United States where hypothetically something starts in Los Angeles, and we appreciate that, but we also need to recognize that Memphis has one of the busiest airports in the United States.[1] Is it the largest freight——

Ms. MADLOCK. It is the largest cargo airport in the world, Senator.

Senator PRYOR. There you go, the largest cargo airport in the world. When I hear a statistic like that, I think it is just as likely that something like this could start in the mid-section of the country, in Memphis, Tennessee.

Memphis is such a regional city because it is right on the Mississippi River and Arkansas is across the river. If you draw a little circle around it, you are touching Mississippi, the very Southern part of Illinois and Missouri. It has always been that way. In Memphis, they call it the Mid-South, right?

Ms. MADLOCK. Yes.

Senator PRYOR. I am curious about your sense about your capability for early monitoring and detection of a flu problem. In other words, theoretically, it could be some airport workers or some pilots or whatever it may be. I know you have a lot of people coming in from overseas because you are an international airport, as well. Do you feel like your city and your State has the tools necessary to do that early monitoring, to maybe try to contain it there before it really becomes a pandemic?

[1] The chart referred to appears in the Appendix on page 90.

Ms. MADLOCK. We are working on several fronts, and I think you have highlighted both our pride and our great challenge in the event a pandemic comes into the United States. We are working on several fronts. One of those is to develop very strong surveillance. We have recently been able to further the development on three different levels and on three different approaches.

One is the Syndromic Surveillance System, using the early aberrant reporting system that was developed by CDC, which allows us to receive electronically information from emergency rooms throughout our region so that we can monitor and see if we have unexpected rates or incidences of infections or diseases that we would not otherwise expect.

In addition to that, we have a system in place utilizing a surveillance system that provides us data from our public school system, where we get reports from 49 different schools to measure and monitor absenteeism rates.

We are also working with a program that I believe is a national program also, but in the Mid-South region is looking at the retail pharmaceutical sales of drug stores, pharmacies throughout the Mid-South, so that we can see if we have had an exceptional spike in sales of anti-diarrheals or cold and flu medication.

Those are kinds of early warning signals that will allow us to, as Dr. Halverson has mentioned and Dr. Vanderwagen mentioned earlier, provide us with an opportunity for early detection to slow down the spread. It is classic public health. It is the attempt to identify a risk early enough so that preventive interventions can be effective.

So those are some of the major thrusts that we have, and I had another response, and as I went down that path I lost it, but I will be happy to respond further to that question.

Senator PRYOR. Great.

Ms. MADLOCK. I can submit you something in writing along those lines.

Senator PRYOR. That would be great. Let me ask the whole panel about a patient care question, and that is, as I understand it, in most day-to-day practices, doctors naturally tend to treat the sickest people first, but with flu and when you have a pandemic situation, there is at least one school of thought that says you should treat those who are the most likely to survive. Who makes that kind of decision? Do we have a protocol? Is it a national protocol or a State-by-State protocol, or city-by-city, hospital-by-hospital? How will that be done? That is kind of a micro question, but I am curious about how that works. Who wants to take that?

Dr. HALVERSON. I would be happy to start. Senator, I think you have identified one of the most difficult questions that I believe our physicians and health officials will face in the event of a pandemic. In Arkansas, one of the ways in which we have addressed this is by working very collaboratively with the Arkansas Medical Society and ethicists and we have created the opportunity to provide a consultation team to hospital ethics committees to begin working now to begin to address those kinds of questions that you have mentioned.

Whether it is the priority of treatment is a major issue. The other issue relates to, for example, patients who are currently on

a ventilator and the ability at some point in time to say that this person who has been on a ventilator for the last 6 months or 8 months or more may not necessarily be able to be sustained on a ventilator because there are other patients that might benefit more.

These are difficult questions and ones in which we have asked our hospitals to begin to address now prospectively. Obviously, it is easier to face these issues today than it is to deal with them in the heat of the moment. So again, it is not going to make it a whole lot easier, but it will hopefully begin to address those issues now.

Senator PRYOR. Did either of you want to take that, as well?

Mr. POPE. Well, I would certainly echo, and my background is not epidemiology or medical ethics for sure, but we will, from the State perspective, look for some guidance from the Federal Government, broad guidelines. Absent those, we will build our own protocols. We do have a group that we can pull together, an ethics group. It may or may not be practical to do that. It is best done ahead of time, obviously, and not after the incident occurs.

Ms. MADLOCK. I certainly would agree with both gentlemen who have spoken thus far on that issue. The other piece would be that I think that is only one of the ethical issues that, again, we at the local level will be looking for support from our partners in the medical community as well as our partners at the Federal level. I know that the Centers for Disease Control is grappling with issues as to, for example, how do we prioritize the distribution of a relatively scarce commodity, such as the vaccine maybe in the early stages. So we have many issues as to how do we utilize scarce resources in a time of medical and public health crisis.

If I might, Senator, just as a point of privilege—not any privilege, but a point of response to your earlier question in regard to Memphis serving as a transportation hub for the Nation, indeed the world, one of the things we are also working on is the development of guidelines and protocols as to how do we isolate, quarantine, or control the potential for an infection to be introduced through that international travel, and so we have convened the airport authority, our medical community, our public health community, and local officials to begin to talk about that very issue and to begin to develop some really strong plans in that regard. We do recognize that is a major point of vulnerability.

Senator PRYOR. Let me ask one more question, and Senator Sununu may have some more, as well, but on the issue of quarantine, I think all the witnesses have mentioned quarantine, all five of you, in different contexts. I know the University of Michigan did a study looking at 43 of the cities who were impacted by the 1918 pandemic and St. Louis, Missouri, had the fewest deaths. One of the reasons they did is because they closed schools, churches, and other community gatherings for 10 weeks to 2½ months.

My question for the panel generally is do we have plans on the shelf that we can pull out to do that and take such drastic steps if we need to? I mean, have you all gone through the planning of all the things that need to be done in order to do that type of quarantine?

Dr. HALVERSON. Senator, I think that is an excellent example of the reason why we need to work together in partnership. As we

speak, actually, we have a very strong relationship with our Department of Education and the over 200 school districts in the State of Arkansas. One of the issues that we are addressing is the authority to actually close schools, and not close schools for a couple of weeks but potentially for several months or maybe the entire term. As you pointed out very correctly, it is really about being able to move quickly and take decisive action to limit public gatherings. Schools are one example. Churches are another. There are a lot of factors relating to—and consequences of taking that action.

So we are working with our Department of Education and school superintendents. We have actually conducted a State-wide planning meeting with our education leaders, and this is one of the issues that we are addressing right now. We are in the process of finalizing a draft on indicators for when we would take action, who would do it, how we would notify people.

But there are a lot of other downstream issues, also, Senator, relating to the credit for children, how the teachers are going to be paid, who would pay the teachers, how to deal with a lot of downstream effects of making that kind of a decision. It is a very big decision, but we think it is important to address it early on.

Senator PRYOR. Let me ask this. Who makes that decision? Is that made on the local school board level or is that made city, county, or State?

Dr. HALVERSON. In Arkansas, and I guess each State may be a little bit different, but as the State Health Officer, I would have the authority to make that decision generally in collaboration with the Director of the Department of Education and with the governor. But we clearly have the legal authority to actually close schools, and that would then be communicated to the local school superintendents and principals. But we really do want to see this as a collaborative decision, but we are in the process right now of delineating roles and responsibilities and action steps to make that very clear with everyone.

Senator PRYOR. Do you have any comments on that?

Mr. POPE. I would just add that the problem is highly complex because in the case of private schools, for example, you have students who may be coming from overseas. You may have students coming from an area where there are already test-positive cases. But I would also say that schools throughout the Nation, especially in the Northern climates, close due to weather events and other events, so they are fully aware of what the consequences are as enunciated by Dr. Halverson when you do close a school.

That said, we have exercised this particular issue. There is a clear delineation as to who makes the call in our State, and that doesn't mean it is an easy call, but we have an educational annex to our State pandemic flu protocol.

Senator PRYOR. Senator Sununu.

Senator SUNUNU. I have one last question for all of you to address. You have all participated in different simulations, tabletop exercises, also live exercises, drills, some on a small scale, I know some on a very significant large scale involving movement of materials and people to try to work through all the issues associated with pandemic response. I would like each of you to name the exercise or the program that you have found to be the most helpful in

revealing steps that need to be taken, assessments that need to be made to improve your level of preparedness. Why don't we start with you, Ms. Madlock.

Ms. MADLOCK. Yes, happy to. We conducted a drill, an exercise in late June of this year. It was an exercise of our POD administration system. We tested our ability to convene all of our partners and stand a POD up in a very brief period of time and be able to work patients through the system and have them immunized and back out again.

I found it to be incredibly valuable for a number of reasons. One, it gave us an opportunity to work with all of those partners that came from all different disciplines throughout the community and the region.

Second, I think the thing that was particularly valuable is that it gave our lay, not our lay, but our professional public health employees across the board, a cross-section of those employees, an opportunity to experience emergency response activities. It is one thing to read about it. It is another thing to learn about it. It is another thing to learn the language of NIMS and be able to talk the talk. But to be actually able to work in a different capacity and see the importance, the critical importance that your role and your showing up, your presence in an emergency situation can make and be is vitally important. We also then gave those same employees an opportunity to participate in the after-action report development so that they gave input into what worked for them, what else they needed to learn and know, and how it changed their perspective of their roles.

So from the standpoint of interagency coordination and internal organizational staff development, to be really ready to respond, I found it to be incredibly valuable——

Senator SUNUNU. Roughly how many people participated?

Ms. MADLOCK. Oh, I would say probably about 100 of about 500 to 600 people on our staff.

Senator SUNUNU. Thank you. Director Pope.

Mr. POPE. I would point to two things quickly. One is, and some of my peers may not agree with me, but the HSC compliance, Homeland Security Exercise and Evaluation Compliance—these are standards that exercises should follow when they are being conducted and I think they force you to really look at your weaknesses and what you need to do to improve.

The second thing is just exercising, getting to your full-scale exercises where you are exercising various pieces. We had a large 5-day pandemic exercise in New Hampshire this past spring. We relocated SNS assets from Georgia to New Hampshire, distributed them. We had hundreds of volunteers in five different cities, communities, or three different communities in New Hampshire actually going through and receiving a theoretic anti-viral or whatever it happened to be.

First of all, it is very heartwarming to see the number of volunteers and people that are actually doing this. This is the battlefield, as far as I am concerned, and the work that is being done is just—I can't say enough about it. But the rewards will be there. Will it be perfect when it happens? No, but if we continue to do this, we

are going to see, I hope, a much better outcome than we did back in the early part of the 20 Century, the last time this happened.

Senator SUNUNU. Dr. Halverson.

Dr. HALVERSON. Probably the most significant exercise for us occurred mid-summer this year. We actually participated with the CDC and created—we were corresponding with CDC in real time using our videoconferencing equipment, stood up our Emergency Operations Center for a couple of days, worked with our hospitals and local health departments. So it really was for us a test of our Federal, State, and local response. It allowed us to deploy equipment that we don't normally use on a day-to-day basis. It allowed us to test things. We found things that didn't work. We found things that we needed to improve on. And frankly, that was a great exercise for us.

Probably one of the most important things, though, that we have identified is now working with our local communities and having them have that same kind of experience. And so we work very collaboratively standing up our EOC as necessary, then working with the local community to test communications systems, work with hospitals, and again, all coordination with our Arkansas Department of Emergency Management, that is a partnership for us, as well, and we communicate very frequently in much the same way that Director Pope has mentioned that they coordinate their efforts. We do in Arkansas, as well, and that has been a good relationship.

But that Federal, State, local exercise, I thought was very revealing, very helpful, and we did a full after-action review, as well.

Senator SUNUNU. Thank you. Thank you all.

Senator PRYOR. Senator Sununu, thank you for your participation here today, and Senator Akaka, as well.

I want to say that we will leave the record open for 2 weeks. I know that some Senators will want to submit questions to the panel. We appreciate you all getting those answers back to us as quickly as possible.

I want to thank both panels, and again give a special thank you to the first panel, who stuck around to hear the testimony of the second panel and to continue the dialogue. It is very helpful.

So I want to thank everybody for participating and this hearing is adjourned.

[Whereupon, at 4:27 p.m., the Subcommittee was adjourned.]

APPENDIX

PREPARED STATEMENT OF SENATOR OBAMA

I would like to thank the Chairman and Ranking Member for their leadership on what continues to be an important health issue in our country—pandemic flu.

As all of you know, we are facing the start of flu season here in the United States, and by many indicators, our public health officials and the medical community are better prepared than in previous years. Recent reports from the Centers for Disease Control and Prevention indicate that a shortage of flu vaccine is not expected, as production has reached an unprecedented 132 million doses. This preparedness is particularly good news, because improving our ability to respond to seasonal flu will certainly enhance our ability to respond to other natural and manmade disasters, including a top concern of mine—pandemic flu.

The Centers for Disease Control has described pandemic flu as inevitable and the biggest threat to public health in this Nation. And we know that much work remains to be done with regards to pandemic preparedness and response. The recent incident involving tuberculosis-infected Andrew Speaker is one stark reminder. As serious as XDR tuberculosis has been to contain and control, dealing with pandemic flu will be many times more difficult.

We need only look back over the last hundred years to remind ourselves of the speed and devastation caused by this potentially fatal virus. The Spanish flu pandemic in 1918, the Asian flu pandemic in 1957, and the Hong Kong flu pandemic in 1968 are all harrowing reminders. The Spanish flu pandemic was the most severe, causing over 500,000 deaths in the United States and more than 20 million deaths worldwide. Obviously, with our global trade and travel, the United States remains highly vulnerable to any pandemic; the recent tuberculosis incident involving Andrew Speaker clearly indicates that much work needs to be done in the area of surveillance and tracking the whereabouts of infected citizens, especially those leaving and entering our country.

Congress has a responsibility to be proactive in building this Nation's defenses against all public health disasters. During my time in the U.S. Senate, I have introduced two bills specific to this challenge—one that speaks directly to the threat of avian flu and another that speaks more broadly at improving our emergency response. Briefly, the AVIAN Act of 2005 focused on pandemic preparedness and response in the areas of surveillance, preventive and medical care, core public health functions, information, and communication, with emphasis on collaboration and cooperation at the State, national and international level. More recently, I introduced the Improving Emergency Medical Care and Response Act of 2007 which will improve the coordination of emergency medical services, expand communication and patient-tracking systems, and implement a regionalized data management system.

Even though the last flu pandemic occurred almost 40 years ago, we need only look as far back as 2005 to the events of Hurricane Katrina to be reminded of our poor response to a large-scale emergency. Preparing for flu outbreaks goes beyond just vaccine production, and we must remain vigilant in our efforts towards refining and implementing an effective and comprehensive preparedness strategy. I commend you for holding this hearing today and I look forward to working with my colleagues on this issue moving forward.

Testimony
Committee on Homeland Security and Governmental Affairs
Subcommittee on State, Local, and Private Sector Preparedness and Integration
United States Senate

Pandemic Influenza: HHS Progress in National Preparedness Efforts

Statement of
Radm. William C. Vanderwagen, M.D.
Assistant Secretary for Preparedness and Response
U.S. Department of Health and Human Services

For Release on Delivery
Expected at 2:30 p.m.
October 3, 2007

Chairman Pryor, Ranking Member Sununu, and distinguished Members of the Subcommittee, thank you for the opportunity to present the progress HHS has made in national preparedness for pandemic influenza. Over the past two years, with the $5.6 billion supplemental funding we received from Congress, we have worked closely with our International, Federal, state and local partners to advance our preparedness for pandemic influenza. While we all understand that preparedness is a process that is never completed, the advances I will highlight for you today demonstrate what can be accomplished when there is a shared vision and support for preparedness. The threat of a pandemic remains a real one, and I appreciate that in holding this hearing, you share our sense of urgency about our preparedness.

As you know, the President released the *National Strategy for Pandemic Influenza* in November 2005, followed by a detailed *Implementation Plan* from the Homeland Security Council (HSC) in May 2006. The HSC Implementation Plan assigned over 300 tasks across the Federal Government to improve our Nation's preparedness for pandemic influenza. HHS has made substantial progress in the nearly 200 action items assigned to our department, completing over 80% in one year. These gains are real and measurable, and they cover a broad range of preparedness, including enhancing our international laboratory networks, developing and releasing guidance on community-based measures to mitigate the effects of a pandemic, and expanding the Medical Reserve Corps program. We also released the HHS Pandemic Plan and HHS Implementation Plan, and those are available alongside additional information and planning resources at www.pandemicflu.gov. I will highlight for you specific accomplishments in three areas: State and Local Preparedness, Countermeasure Procurement and Advanced Development, and Federal Preparedness.

All of these accomplishments are consistent with the mission of my office, which Congress created in December 2006 through the Pandemic and All-Hazards Preparedness Act. The ASPR mission is to lead the nation in preventing, preparing for, and responding to the adverse health effects of public health emergencies and

disasters, and the vision we see is "A Nation Prepared." Within HHS, my office coordinates the preparedness and response enterprise, which focuses on the continuum of preparedness from research and development of medical countermeasures to response delivery platforms that support state and local responders in reaching our citizens during an incident.

Our preparedness for pandemic influenza involves a shared responsibility among our entire Department, our partners in the International community, the Federal interagency, state, local, tribal and territorial governments, the private sector, and, ultimately, individuals and families. In addition, we believe our planning for an influenza pandemic is part of an all-hazards approach. The gains we make in increased preparedness and response capability for pandemic influenza will help us across the spectrum of public health emergencies and disasters.

Enhanced State and Local Preparedness

By the end of this year, the Department will have awarded over $600 million in emergency supplemental funding through the Centers for Disease Control and Prevention (CDC) and ASPR to 62 awardees: 50 states, five U.S. territories, three Freely Associated States of the Pacific, New York City, Los Angeles County, Chicago, and the District of Columbia to upgrade state and local capacity in regard to pandemic influenza preparedness. The funding has occurred in three general phases:

Phase 1- $100 Million

Senior HHS officials, led by Secretary Leavitt, conducted Pandemic Influenza Preparedness Summits in every state to facilitate community-wide planning and to promote shared responsibility for pandemic preparedness. To assess gaps in pandemic preparedness and guide preparedness investments, CDC created an assessment tool for awardees to use in evaluating their own jurisdiction's current state of preparedness.

The awardees were required to submit: 1) a gap analysis; 2) a proposed approach to filling the identified gaps; and 3) an associated budget for the critical tasks necessary to address those gaps. High priority areas being addressed include:

- Exercising pandemic incident command systems,
- Linking animal and human surveillance systems,
- Augmenting laboratory capacity,
- Plans for vaccine and antiviral distribution, mortuary affairs, and continuity of essential functions

*Phase 2- $250 M*illion *($225* million *for four priority activities and $25* million *for competitive demonstration projects)*

Of the Phase 2 funds, $225 million were used for four priority activities: 1) work with jurisdictional colleagues in emergency management, community organizations and other agencies to develop a jurisdictional workplan to address gaps identified by the assessment process; 2) develop and exercise an antiviral drug distribution plan; 3) develop a pandemic exercise schedule to include – at a minimum -- medical surge, mass prophylaxis, non-pharmaceutical public health interventions and the antiviral drug distribution exercises; and 4) submit the jurisdictional pandemic influenza operational plan.

Three planning priorities were targeted — state/local exercises of key plans (mass vaccination using seasonal flu clinics, community containment, medical surge); developing antiviral distribution plans; and review of statewide pandemic influenza plans.

- 85% of the awardees used seasonal influenza vaccination clinics to exercise mass prophylaxis plans (Highlights - some state medical boards used Emergency Medical Technicians (EMTs) and paramedics to act as vaccinators to

reduce the burden on public health staff; some states used drive-through clinics to increase throughput and enforce social distancing.)

- 83% of the awardees participated in tabletop exercises of non-pharmaceutical interventions and plans to contain the spread of pandemic influenza. (Emphasis on school closing decisions and discouragement of large public gatherings; the majority of awardees responded that gaps in their existing plans were identified and that further planning refinements are necessary to produce viable and executable plans. Funding in Phase 3 will help address these gaps.)
- Over 50% of the awardees reported conducting exercises of antiviral distribution plans.
- The public health and medical components of this funding supplement have included two of the Target Capabilities identified as part of National Preparedness under Homeland Security Presidential Directive #8: Mass Prophylaxis and Medical Surge.
- 97% of the awardees have submitted pandemic influenza operational plans that involve interaction and partnership with law enforcement and emergency management (antiviral distribution), education, and business sectors (community mitigation and continuity of operations).

The remaining $25 million Phase 2 funds will be used to make pandemic influenza emergency supplemental awards based on performance. The funds will be awarded competitively to awardees that successfully propose a plan to develop, implement and evaluate pandemic influenza interventions. Proposals will be solicited for public health interventions for which there are few data, unclear consequences, or inconclusive effectiveness.

Phase 3- $250 Million Available.

CDC has awarded $175 million of Phase 3 funding to support awardees' efforts to fill

gaps identified in Phases 1 and 2. The awardees will be required to utilize the tools developed under the auspices of the Homeland Security Exercise Evaluation Program to create planning, training, and exercise evaluation programs. A total of $75 million will be awarded as supplements to the 62 entities that currently receive awards through the Hospital Preparedness Program (HPP) cooperative agreements. Applications are due in October 2007.

The HPP transferred from the HHS Health Resources and Services Administration (HRSA) to ASPR in March of this year as directed under the PAHPA. The Program has continued to focus on enhancing surge capacity. Priorities for Medical Surge that were evaluated as part of the state plan review are as follows:

- States have the ability to report available beds which is a requirement in the 2006 Hospital Preparedness Program Cooperative Agreement,
- Effective use of civilian volunteers as part of the Emergency System for Advance Registration of Volunteer Health Professionals (ESAR-VHP) and Medical Reserve Corps (MRC) programs,
- Planning for Alternate Care Sites,
- Development of Health Care Coalitions that promote effective sharing of resources in surge situations – Will be funding 10 partnership demonstration projects for $18.1 million in FY 2007, and
- Plans for providing the highest possible standards of care in situations of scarce resources. ASPR partnered with the HHS Agency for Healthcare Research and Quality (AHRQ) in the development of a *Community Planning Guide on Mass Medical Care with Scarce Resources*. The guide includes a pandemic influenza case study.

The remainder of the Phase 3 funding has been allocated to the HPP program for upgrading state and local pandemic influenza preparedness capacities. This funding

will establish stockpiles of critical medical equipment and supplies, as well as be used to develop plans for maintenance, distribution and sharing of those resources. This funding may also be used to support the planning and development of alternate care sites (ACS) and medical surge exercises for pandemic influenza. Examples of allowable activities include:

- Stockpiles of ventilators, ancillary supplies and oxygen,
- Personal protective equipment (PPE) and infection control supplies,
- Alternate care sites – staffing, operational plans and exercises,
- Mass fatality plans and equipment and supplies, and
- Medical surge exercises.

Countermeasure Procurement and Advanced Development

HHS has also made tremendous progress in addressing the Pandemic influenza medical countermeasure goals that emanate from the HSC Implementation Plan. These goals are listed on the table below.

Vaccine Goal #1	To establish and maintain a dynamic pre-pandemic influenza vaccine stockpile available for 20 million persons: H5N1 stockpiles (40 million doses)
Vaccine Goal #2	To provide pandemic vaccine to all U.S. citizens within 6 months of a pandemic declaration: pandemic vaccine (600 milliondoses)
Antivirals Goal #1	To provide influenza antiviral drug stockpiles for treatment of pandemic illness for 25% of U.S. population who we estimate will become clinically ill during a pandemic (75 million treatment courses[1])
Antivirals Goal #2	To provide influenza antiviral drug stockpiled for strategic limited containment at the onset of a pandemic (6 million treatment courses)
Diagnostics Goal #1	To develop new high throughput laboratory and Point of Care influenza diagnostics for pandemic virus detection

[1] This figure assumes a severe, 1918-like pandemic.

- *Advanced Development:*
  - *Cell-based vaccines.* Current influenza vaccines are based on influenza virus grown in fertilized chicken eggs. In an effort to modernize influenza vaccine manufacturing for greater flexibility and less vulnerability, and to increase domestic manufacturing capacity with the potential for surge production, six contracts were awarded in 2005-06 for $1.1 billion to develop seasonal and pandemic cell-based influenza vaccines towards U.S.-licensure. In 2007 three manufacturers will begin late stage pivotal clinical evaluation of their cell-based influenza vaccines with sights set on Biologics License Application (BLA) submissions to FDA in 2008. Further, one manufacturer has already broken ground on new state-of-the art cell-based influenza vaccine manufacturing facilities in North Carolina with completion scheduled in 2010. The ultimate goal here is to strengthen the U.S. domestic manufacturing system and to ensure adequate U.S.-based production capability.

  - *Antigen-sparing vaccines.* To stretch the domestic pre-pandemic influenza vaccine manufacturing capacity further and to provide vaccines with broad cross-protective immunity, three contracts were awarded in January 2007 for $133 million to develop antigen-sparing pandemic influenza vaccines towards U.S.-licensure. These H5N1 vaccine candidates formulated with new adjuvants show great promise in mid-stage clinical evaluation with expectations that one or more will be submitted as BLAs in 2008 for licensure. An adjuvant is a vaccine additive that amplifies the immune response. HHS is coordinating studies with a number of manufacturers to determine whether these adjuvants can be used safely and effectively with H5N1 vaccine antigens currently in the stockpile that have been produced by different manufacturers – a key step toward expansion of the pre-pandemic vaccine stockpile supply.

- *Next generation vaccines.* Our investments in cell culture technology mentioned above will expand production capability. Because of the time vaccine production takes (20-23 weeks from identification of the pandemic virus), we are also investing in next generation vaccines with shorter production timelines. To provide pandemic vaccine earlier after the onset of a pandemic, a synopsis for a contract solicitation was issued in August 2007 to seek proposals for advanced development of next generation recombinant influenza vaccines over the next 3-5 years with the goal of accelerating the development of new vaccine technologies that will greatly shorten vaccine production timelines in a pandemic.

- *Antivirals.* Until recently, there was little incentive for manufacturers to develop new approaches to treat influenza. Currently, we have only two classes of antiviral drugs that are effective against influenza. Only one of those classes of drugs, the neuraminidase inhibitors (oseltamivir [Tamiflu®] and zanamivir [Relenza®]), is being actively stockpiled because of the development of resistance to the older class of antiviral drugs. As our options are limited, we need new antiviral candidates in case clinically significant resistance to our current stockpile of antiviral drugs develops. To promote the advanced development of new influenza antiviral drugs towards U.S.-licensure, a contract was awarded in January 2007 for $102 million to develop peramivir, a neuraminidase inhibitor that may be administered in life-threatening influenza illnesses. This drug is in mid-stage clinical evaluation presently. In 2008 more influenza antiviral drug candidates will emerge in the pipeline that may be ready for advanced development and eligible for funding. We need new antiviral candidates should the viruses become resistant to the currently available antivirals.

- *Diagnostics.* To provide healthcare professionals with a means to distinguish pandemic influenza viruses from other respiratory pathogens including seasonal influenza viruses, four contracts for $12 million were awarded in November 2006 for development of rapid point-of-care diagnostic devices. By the end of 2007, two of these devices will be evaluated independently for further clinical development with expectations of licensure submissions in 2009. Solicitations to award contracts for development of high throughput laboratory and single-use home diagnostics for pandemic influenza are also expected to be issued by the end of 2007.

- *Ventilators.* To close the enormous gap in the availability of ventilators, which will be essential to treat severely-ill patients during an influenza pandemic, a Blue-Ribbon Panel will be assembled this fall to establish the product requirements for a next generation affordable, mobile ventilator. A contract solicitation will be issued early in 2008 for the advanced development of next generation ventilators.

- *Federal Stockpile Acquisitions.*
  - *Vaccines.* To establish pre-pandemic vaccine stockpiles, multiple contracts have been awarded for over $900 million between 2004 and 2007 to U.S.-licensed influenza vaccine manufacturers to develop and produce at commercial scale using licensed manufacturing processes and facilities for egg-based inactivated split H5N1 vaccines against multiple virus clades. These stockpiling efforts led to the U.S. licensure of the first H5N1 vaccine in April 2007. To date 15 million vaccine single antigen doses have been manufactured as bulk vaccine product, and 11 million more doses will be manufactured this fall for a total of 26 million by the end of 2007. I should note, however, that while pre-pandemic vaccine stockpiles are based on our best assumptions of what virus strains are

likely to present during a pandemic, they may not closely match the virus that actually arrives. Finally, Secretary Leavitt issued a Pandemic Response Emergency Preparedness Act declaration in January 2007 to provide comprehensive liability immunity for manufacturers and administrators of H5N1 influenza vaccines.

- *Antiviral Drugs.* The Pandemic Influenza Plan seeks to ensure the availability of antiviral treatment courses for 25 percent of the U.S. population or 81 million treatment courses. To meet the federal stockpile goal of 50 million treatment courses of influenza antiviral drugs for treatment during a pandemic, 37.5 million treatment courses of U.S.-licensed neuraminidase inhibitors were purchased in 2006-07 and delivered to the Strategic National Stockpile (SNS). The U.S. now has domestic manufacturing capabilities for these drugs. The remaining 12.5 million treatment courses will be purchased in FY08 upon approval of the pending appropriation request. To assist States in meeting their collective pandemic stockpile goal of 31 million treatment courses of influenza antiviral drugs, $170 million was allocated to subsidize state purchases made using a federal contract with manufacturers of antiviral drugs. To date the States have purchased 15.1 million treatment courses of influenza antivirals for their stockpiles and are expected to reach the overall goal by July 2008.

- *Ventilators.* The SNS will purchase 2000 new ventilators in 2007 for distribution during a pandemic or as required in other all hazards incidents and states can invest in ventilator procurements through the investments being managed through the HPP program.

- *Syringes*. The SNS will purchase in excess of 20 million syringe/needle units in 2007 for usage with pre-pandemic influenza vaccines.

- *Infrastructure Building.*
  - *Vaccines*. To utilize existing facilities for pandemic influenza vaccine manufacturing, two contracts were awarded in May 2007 for $133 million for retrofitting existing domestic biological manufacturing facilities for production of egg-based influenza vaccines and providing warm base operations for up to five years. A contract solicitation for proposals to establish new domestic cell-based influenza vaccine manufacturing facilities is also expected in 2008 with manufacturing capacity requirements of at least 150 milliondoses of pandemic vaccine within six months.

While we have been making great strides with procurement and advanced development we have also drafted guidance on how to maximize these investments. We believe it's important to work with stakeholders in order to finalize that guidance, and that preparedness is best achieved not just by focusing on producing additional products, but by assuring that they are deployed and used optimally. This requires leadership in developing guidance and promoting preparedness, consultation with those who have a critical role in implementation (including states and professional societies), and understanding and overcoming any barriers to achieving success.

Federal Preparedness Planning

For the past six months, ASPR has been a lead partner in the development of a U.S. Government-wide Pandemic Influenza Strategic Plan, which describes what steps Federal Departments will take to respond to the emergence of a novel influenza virus abroad and here in the homeland. This strategic planning process further codifies the HHS public health and medical responsibility to mitigate illness and reduce deaths

during a pandemic through the provision of medical countermeasures and materiel, community mitigation guidance, necessary laboratory and surveillance tools, and some of the nation's finest public health and medical emergency response personnel.

The Department's operational plan for pandemic influenza response details how HHS will fulfill its important responsibilities and how ASPR will coordinate the deployment and utilization of HHS assets and expertise. This plan, or playbook as we call it, will be further refined in the coming months to ensure a seamless integration with the U.S. Government-wide Plan. Further, HHS Operating Divisions including the CDC are developing their own detailed operational plans that are aligned with the Department's plan to enable a cohesive Departmental preparedness approach. A goal for next year is to work with states to develop regional playbooks that will continue to promote integrated planning across all tiers of government.

HHS held a number of exercises to test the operational plans I have described. ASPR hosted Department-wide exercises with senior leadership to test how we will leverage the full scope of HHS resources and capabilities in response to pandemic influenza. ASPR has pre-identified six Senior Federal Officials to work in coordination with the pre-designated Pandemic Influenza Principal Federal Officials, and our Senior Federal Officials are engaged in State-sponsored exercises taking place in their regions. In addition, CDC launched an extensive exercise program to identify planning gaps and stretch the limits of their assumptions and response strategies.

The last two exercises have included state participation to promote seamless preparedness integration across the different tiers of response. The state participants were actively involved in the planning meetings leading up to the conduct of both of these CDC-sponsored exercises.

- April 25-27, 2007: coordinated activities with State Emergency Operations Centers (EOCs) and State Health Department EOCs from three states (Arkansas, Florida and Ohio).

- August 14-16: CDC Pan Flu Surge exercise, where representatives from five states (Arkansas, Florida, Georgia, Michigan and Ohio) served in our Exercise Control Group to replicate the activities of their states and those of other states that were not actively represented.

The CDC's Division of Strategic National Stockpile (DSNS) also conducted a number of exercises. For example:

- *Operation Wild Canary*, a full scale exercise executed in partnership with the State of Iowa. The purpose of the exercise was to test antiviral distribution from the federal stockpile down to the local treatment facility. During the exercise the DSNS deployed training material exactly replicating Iowa's pro-rata allocation of antiviral drugs to the state receipt, stage, and store site in Des Moines. From there the state sent antiviral drugs on a pre-established allocation to distribution hubs throughout the state. Local treatment facilities then received their antiviral allocation from the distribution hubs.

Some examples of state and local promising practices in pandemic influenza activities include:

- <u>Maine</u>
    - Formed pandemic influenza workgroups on all levels including:
        - Statewide Steering Committee including public constituents
        - County Pandemic Influenza Planning Groups including public constituents and association and governmental members at the county and local level.

- Intergovernmental Pandemic Influenza Planning Committee including the Departments of Agriculture and Inland Fisheries, the Maine Emergency Management Agency, and Maine Emergency Medical Services.

- Wisconsin

The state has significantly improved planning for treatment centers resources and personnel. As a result of pandemic influenza planning the state has a better understanding of their treatment facilities' capabilities, as well as an accurate location and point of contacts for each treatment facility, which has helped to improve their overall level of preparedness.

- Atlanta, Georgia and Los Angeles County, California

  - Both cities are working with the Business Executives for National Security (BENS) to engage local corporations in preparedness planning.
  - In an upcoming exercise drill, the L.A. Business Force/Homeland Security Advisory Council will be the first private-sector representative ever included in a security exercise at the vital Port of Los Angeles/Long Beach, the gateway for 40 percent of all U.S. trade.

Thank you for the opportunity to present the progress HHS has made in national preparedness for pandemic influenza. With your leadership and support, we have made substantial progress. The threat remains real, and we have much left to do to ensure that we meet our mission of a Nation prepared for a potential influenza pandemic.

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

STATEMENT FOR THE RECORD

B. TILMAN JOLLY, M.D.

ASSOCIATE CHIEF MEDICAL OFFICER FOR MEDICAL READINESS
OFFICE OF HEALTH AFFAIRS
UNITED STATES DEPARTMENT OF HOMELAND SECURITY

BEFORE THE

UNITED STATES SENATE
COMMITTEE ON HOMELAND SECURITY AND GOVERNMENTAL AFFAIRS

SUBCOMMITTEE ON STATE, LOCAL, AND PRIVATE SECTOR PREPAREDNESS AND INTEGRATION

"PANDEMIC INFLUENZA: STATE AND LOCAL EFFORTS TO PREPARE"

OCTOBER 3, 2007

Dr. Til Jolly, DHS Associate Chief Medical Officer for Medical Readiness

Before the U.S. Senate

Committee on Homeland Security

Subcommittee on State, Local and Private Sector Preparedness

"Pandemic Influenza: State and Local Efforts to Prepare"

October 3, 2007

Mr. Chairman, Ranking Member Sununu and Members of the subcommittee:

Thank you for the opportunity to testify before the subcommittee to discuss State, local and private sector pandemic influenza preparedness and integration efforts. I am Dr. Til Jolly, Associate Chief Medical Officer for Medical Readiness, within the Office of Health Affairs at the Department of Homeland Security (DHS). Before I begin, I would like to take this opportunity to thank you and the Subcommittee on behalf of Secretary Chertoff for your continued willingness to work alongside the Department to provide leadership in protecting and ensuring the security of our homeland. I would also like to thank our Federal, State, local, tribal and private sector partners, including the Department of Health and Human Services (HHS) and others with whom we work every day.

To begin, I would like to take a few moments to review some basic facts about pandemics and their potential impacts on our nation. Pandemic influenza occurs when a novel strain of influenza virus emerges that has the ability to infect humans and cause severe disease, and when efficient and sustained transmission between humans occurs. This scenario creates unique challenges. Unlike other incidents, such as a hurricane or a bioterrorist attack, a pandemic is not a singular event, but is likely to

come in waves, each lasting weeks or months, passing through communities of all sizes across the nation and the world simultaneously. The complete event may last as long as 18 months. Based on projections modeled by HHS from prior pandemics, an influenza pandemic could result in 200,000 to 2 million deaths in the United States, depending on its severity. Further, an influenza pandemic could have major impacts on society and the economy, including our nation's critical infrastructure and key resources, as many of our nation's workforce could be absent for extended periods of time, either sick themselves or caring for loved ones at home.

DHS has been actively engaged with its federal, state, local, territorial, tribal, and private sector partners to prepare our nation and the international community for an influenza pandemic. As outlined in the Implementation Plan for the National Strategy for Pandemic Influenza, DHS is responsible for the coordination of the overall Federal response during an influenza pandemic. The Secretary designated the Office of Health Affairs to lead the coordination for pandemic preparedness including implementation of policies that facilitate compliance with recommended social distancing measures, development of a common operating picture for all Federal departments and agencies, and ensuring the integrity of the Nation's infrastructure, domestic security and entry and exit screening for influenza at the borders.

To date DHS has accomplished over 80% of the requirements outlined in the Implementation Plan. DHS recognizes the key role of HHS in its responsibility to lead the coordination of the public health and medical emergency response activities during a pandemic under Emergency Support Function (ESF)-8, including the deployment and distribution of vaccines, antivirals and other life-saving medical countermeasures from the Strategic National Stockpile. DHS also recognizes the Department of State's role to lead the coordination of international efforts including U.S. engagement in a broad

range of bilateral and multilateral initiatives that build cooperation and capacity to fight the spread of avian influenza and to prepare for a possible pandemic. The Department of Agriculture (USDA) conducts surveillance for influenza in domestic animals and animal products, monitoring wildlife in partnership with the Department of the Interior, and working to ensure an effective veterinary response to a domestic animal outbreak of highly pathogenic avian influenza.

In working with our partners, DHS has developed and implemented a number of initiatives and outreach to support continuity of operations planning for all levels of government, including State, local, tribal and private sector entities. I will highlight a few noteworthy accomplishments DHS has achieved with its partners and stakeholders.

DHS produced and released the *Pandemic Influenza Preparedness, Response, and Recovery Guide for Critical Infrastructure and Key Resources (Guide)*. Tailored to national goals and capabilities, and to the specific needs identified by the private sector, this business continuity guidance represents an important first step in working with the owners and operators of critical infrastructure to prepare for a potentially severe pandemic outbreak. The *Guide* has served to support business and other private sector pandemic planning by complementing and enhancing, not replacing, their existing continuity planning efforts. With that in mind, the Federal government developed the *Guide* to assist businesses whose existing continuity plans generally do not include strategies to protect human health during emergencies such as those caused by pandemic influenza or other diverse natural and manmade disasters.

DHS is currently leading the development of specific guides for each of the 17 critical infrastructure and key resource sectors. These include agriculture, food, and water, public health, emergency services, telecommunications, banking, defense systems, transportation, energy resources, and others.

These guides are being developed utilizing the security partnership model and in collaboration with our Federal and private sector partners.

In coordination with other Federal departments and agencies, DHS is developing a coordinated government-wide planning forum as part of the Incident Management Planning Team. An initial analysis of the response requirements for Federal support has been completed. From this analysis, a national plan defining the federal concept for coordinating response and recovery operations with our partners at the state, local, tribal and private sector during a pandemic has been developed and is currently undergoing interagency review. Utilizing this planning process, a coordinated federal border management plan has been developed and is currently in review. State, local, tribal, territorial, and private sector partners provided critical input, along with our Federal interagency partners.

DHS has conducted or participated in federal and state interagency pandemic influenza exercises which have focused on varied issues related to preparedness. These exercises have included:

- FEMA's Determined Accord series for continuity of operations with federal, state, local, tribal, territorial entities.
- Several Customs and Border Protection exercises – addressing transportation and border challenges.
- A U.S. Fire Administration tabletop exercise for development of best practices models and protocols for EMS, 911 Call Centers, Fire Services, Emergency Managers, Law Enforcement and Public Works. This will allow for further integration of a unified Federal, state, local and private sector emergency response capabilities.
- HHS sponsored regional National Governors Association Pandemic Influenza exercises, CDC sponsored state and local exercises, and DoD pandemic influenza exercises.

- Multiple workshops and forums have been conducted with the owners and operators of critical infrastructure and key resources.

Consistent with his role under Homeland Security Presidential Directive – 5, Secretary Chertoff pre-designated Vice Admiral Vivien Crea, the Vice Commandant of the U.S. Coast Guard, as the National Principal Federal Official (PFO) for pandemic influenza and has pre-designated five regional PFOs. Likewise, our partners have pre-designated Infrastructure Liaisons, Federal Coordinating Officers, other senior health officials, as well as Defense Coordinating Officers. Vice Admiral Vivien Crea and the Regional PFOs have participated in several training sessions regarding pandemic preparedness duties, and have held two orientation sessions to date. These sessions included updates from the Departments of State, Agriculture, HHS and DoD, as well as various components within DHS. Additionally, the PFO teams are conducting outreach both nationally and in their specific regions to establish a more formalize exercise and training program, which is being developed by DHS.

On an ongoing basis, DHS participates in interagency working groups to develop guidance including community mitigation strategies, medical countermeasures, vaccine prioritization, and risk communication strategies. These groups bring together a wide range of federal partners to discuss coordination, outreach to local communities, and other issues related to pandemic preparedness.

In closing, significant progress has been made to support State, local, tribal and private sector entities as well as the private sector for the development of policies and strategies to address an influenza pandemic. In fact, September was National Preparedness Month, which encourages all Americans to prepare for emergencies and take the necessary actions for all-hazards. Many of these accomplishments can be incorporated into an all-hazards framework to promote the national culture of preparedness. DHS looks forward to continuing its partnership with the federal interagency, state,

local, tribal, territorial, and private sector stakeholders to complete the work of pandemic preparedness and to further the nation's ability to prepare for, respond to, and recover from all-hazards.

Thank you again for the opportunity to testify on behalf of the Department of Homeland Security on these issues of critical importance to our nation's security and well-being. I am happy to answer any questions you might have.

Testimony of

Paul K. Halverson, DrPH, MHSA, FACHE

Director and State Health Officer

Arkansas Department of Health

Before the

U.S. Senate Committee on Homeland Security and Governmental Affairs

Ad Hoc Subcommittee on State, Local and Private Sector Preparedness and Integration

on

"Pandemic Influenza: State and Local Efforts to Prepare"

Opening

Good morning. I am Dr. Paul Halverson, Director of the Arkansas Department of Health (ADH). I would like to thank Senators Pryor and Sununu, and other members of the subcommittee for the opportunity to testify today and discuss how the federal government can help facilitate state and local preparedness for pandemic flu.

As a member of Governor Mike Beebe's cabinet, I report directly to the Governor and am responsible on his behalf for the health of Arkansans. The Arkansas Department of Health is a centralized public health agency with over 2,800 employees and approximately 2,000 contract employees. We have 95 local health units in Arkansas' 75 counties. In addition, we have centralized laboratory, epidemiology, chronic disease, communicable disease, pharmacy, emergency preparedness and environmental health branches, among others, housed in five major Centers. We provide services ranging from vaccinations for seasonal flu and childhood illnesses to restaurant inspections and the provision of safe drinking water.

The Arkansas Department of Emergency Management has primary responsibility for emergency response in Arkansas including situational awareness, guidance to local jurisdictions, and coordinating the deployment of federal and other resources when state and local assets cannot meet the need. However, in health and medical preparedness and response activities such as pandemic influenza, the Governor has designated the Department of Health as the lead agency.

Background and Challenges

Before I begin addressing pandemic preparations in Arkansas, first let me briefly introduce you to our great, small state and some of the challenges and opportunities for emergency response. As Senator Pryor is well aware, according to July 1, 2006, census figures, we have approximately 2,800,000 persons residing in Arkansas. The largest city--our capital, Little Rock--has roughly 184,000 Arkansans. We have only five other major metropolitan areas with populations over 55,000. The remainder of our state is a collection of rural small towns and villages.

We are home to many people that I would call the typical Arkansan. This American is endowed with a "can-do" spirit as was demonstrated in our Katrina and Rita hurricane response. As a result of long hours of care on the part of thousands of dedicated volunteers, we housed, fed and provided medical treatment to roughly 75,000 displaced persons in a very short time period with a minimum of difficulty, and many of those efforts are still ongoing.

We are home to a growing number of Hispanic Americans. The percent of Arkansas' population that was Hispanic in 2005 was 4.7%. This is a 48% increase since 2000. The

percent of Arkansas' population that was Hispanic in 2006 was 5.0%, which is a 60.9% increase since 2000.

We are home to an Asian population. Fort Chaffee in the northwest corner of our state was a major receiving station for Vietnamese and other Asian evacuees during the Vietnam War, and those persons have settled in our area and prospered.

We are home to the largest population of Marshallese on the North American continent. The Marshallese manifest a heavy disease burden and are plagued with a high incidence of tuberculosis and other communicable diseases. Additionally, language barriers must be overcome with regard to interventions and treatment for this community.

The cost of living in Arkansas is very affordable, comparatively speaking. We are blessed with abundant natural resources and spectacularly beautiful countryside. As such, we are home to an ever-growing retirement community. The Bentonville/Bella Vista area in northwest Arkansas is one of the top ten growth areas in the country for senior Americans. This population shares many of the challenges facing all retirees—access to care and issues regarding easy navigation of the healthcare system.

These diverse groups bring with them unique communication, cultural and healthcare challenges—challenges that would be magnified tremendously were we to experience pandemic influenza.

Although we are home to Walmart--the largest retail manufacturer in the country—approximately one-third of our workforce is employed by companies with less than 500 employees. These small businesses cannot withstand the impact of lost work days due to infectious disease outbreaks such as pandemic influenza. Many workers, especially blue collar personnel, depend on schools and daycare centers to house their children while they are employed. Many do not have the luxury of taking leave without pay because they live on such a meager existence. Our telecommunications infrastructure cannot support a large number of people working from home.

We have 84 hospitals that have participated in the Hospital Preparedness Program since its inception in 2002. Many counties in our state have one facility serving all of the needs of that area. Because of the rural nature of Arkansas, access to care is a critical issue. If we were to experience pandemic influenza, and assuming a 35% attack rate, approximately 500,233 of the state's 2,800,000 citizens would become clinically ill, 11,167 would be hospitalized and 3538 would die. We have 10,897 hospital beds and 2,000 physicians in active practice. This rate of illness would be extremely detrimental to the state's ability to survive.

One of the biggest challenges facing our state is our ability to sustain basic needs such as electricity, food, water and other services during emergency events because our smaller communities potentially lack the resources from a manpower perspective to support these services.

This is a very brief snapshot of life in the Natural State and some of the issues facing the public's health in the event of an emergency like a pandemic.

Federal funding and guidelines provided by the Department of Health and Human Services and the Centers for Disease Control and Prevention have enabled Arkansas to make extensive progress in dealing with these challenges.

The Arkansas Pandemic Influenza Response Operations Plan

Arkansas took an early, proactive position in regard to pandemic preparedness, enacting planning strategies designed to protect Arkansans from any threats to the public health, whether from terrorist attack or natural disaster—an all-hazards approach. We have only to remember the success we had in providing over 75,000 Katrina and Rita hurricane evacuees with the health and human services they needed immediately after the event and for months after. It was our emergency response plans that were already in place that allowed us to respond efficiently and effectively.

Specifically, Arkansas considers preparedness and containment as key elements in pandemic response.

1. Preparation will lessen the direct medical and economic effects of a pandemic by ensuring that adequate measures will be taken and implemented before the pandemic reaches Arkansas.
2. Preparing now will provide long-term benefits. Improving our public health infrastructures will have immediate and lasting benefits, such as reducing the effect of other infectious disease epidemics and being better prepared for other public health emergencies.

The Arkansas response encompasses, as follows:

1. Early detection is our best weapon and first line of defense against pandemic influenza. Arkansas maintains constant vigilance in influenza surveillance on both the state and global levels utilizing reports from the WHO and CDC as well as local reports of influenza-like illness from sentinel physicians, school reports, and Medicaid claims data.
2. The Arkansas Public Health Laboratory provides testing for circulating and new subtypes of influenza.
3. Pandemic Planning Guidance and technical assistance is provided to county health units as they collaborate with community leaders on local plans.
4. Statewide allocation and dispensing of vaccines and antiviral medications.
5. Mass vaccination clinics that continually benefit from full-scale exercises.
6. Development of educational information is distributed to individuals and families, businesses, communities, and local and state government.

Because a pandemic is a global event with local impact, all levels of government must have a clear understanding of their resources and how to mobilize a response with pre-

established partners who are prepared to act according to their response plans. Arkansas's plan utilizes resources including local, state, federal, and the private sectors.

We recognize the importance of collaboration on the part of all agencies in the state and other partners in health-related fields. Although the Arkansas Department of Health will take the leading role in a pandemic flu event, many other partners are crucial to a coordinated response.

1. Arkansas utilizes the Emergency System for Advanced Registration of Volunteer Health Professionals (ESAR-VHP), an electronic volunteer recruitment program to address the issue of medical surge. This system allows the state to tap into its reserves of retired and student professionals as well as address issues of credentialing that proved to be critical during the Rita and Katrina hurricanes.
2. The University of Arkansas for Medical Sciences (UAMS) has addressed the issue of the medical workforce through the development of the Medical Reserve Corps. These trained professional volunteers agree to respond to state emergencies and disasters at our call. Their services are critical during pandemic influenza when hospitals are overwhelmed and care must be given at alternative sites or at home by these medical professionals.
3. Utilizing CDC estimates of the virulence of the disease, we could experience 3,538 to 11,790 deaths. The issue of mass fatality is being addressed by a collaborative effort with state coroners and an international disaster management organization with demonstrated capacity to address mass fatalities.
4. The Arkansas Department of Health has worked closely with the Arkansas Hospital Association, hospital preparedness regions, and community health centers in many Arkansas communities to develop plans to ensure a coordinated community response during a disaster. These groups meet regionally on a regular basis in the state to address issues identified in local hazardous vulnerability assessments. These groups have worked with local emergency management, local public health and other preparedness partners to develop drills and exercises related to these issues. They help identify gaps in the medical system so that resources can be directed to these areas. Currently, these groups are working to develop alternate care sites in the states and develop plans to equip and staff them to increase medical surge capacity.

Our Successes

The Arkansas Department of Health is actively taking steps to deal with the potential of an influenza pandemic. Some of these include:

1. The creation of an internal working group charged with leading pandemic preparedness response as well as a multi-agency organization which includes leaders from hospitals, physician organizations, law enforcement agencies (local, state and federal) to advise our pandemic efforts.
2. We anticipate that vaccine may not be available. Because of this, the 85th General Assembly appropriated $6 million dollars for procuring antivirals. We purchased

the maximum amount allowed by federal contract--286,000 treatment courses. With these funds, we have also purchased and stored personal protective equipment which will be used during a pandemic to protect personnel from contracting the illness.

3. Parallel with the purchase, we convened an expert panel to provide recommendations for the use of antivirals with regard to priority groups. Ethical considerations were foremost in our mind, and input was needed prior to a pandemic. Discussions such as these, we feel, are most important as these kinds of ethical issues will certainly arise during a pandemic.
4. Because our hospital capacity would quickly reach maximum capability in a pandemic, we are supporting the expansion of a Medical Reserve Corps (MRC) for statewide surge capacity. Our MRC performed admirably at Fort Chaffee evaluating thousands of evacuees from Louisiana.
5. We have constructed an emergency operations center to coordinate Department of Health response during a crisis. This is one improvement in overall communications. With the assistance of federal funding our communication ability has significantly improved allowing the Department of Health to communicate with our local health departments and communities not only about pandemics but other potential health concerns (tornadoes, floods).
6. Our new state of the art public health lab has the capacity to identify new strains of influenza. This lab has been has been designated by the CDC as a testing laboratory for avian flu.
7. Surveillance is critical to detect new flu strains entering the state and we are increasing capacity for early identification of pandemic flu. Arkansas maintains constant vigilance in influenza surveillance on both the state and global levels utilizing reports from the WHO and CDC as well as local reports of influenza-like illness from sentinel physicians, school reports, and Medicaid claims data.
8. We believe that plans must be tested. Should a vaccine for pandemic flu be available, our Health Department is prepared to immunize most of the population of Arkansas within a 2-week time period. We have tested our plans and on November 3, 2004, we immunized approximately 58,000 high-risk citizens against influenza in one day. No other state accomplished such a task at that time. This exercise provided an opportunity for the state to collect, analyze, store, and report vaccine data in a non-traditional mass dispensing setting. The clinics dispensed an average of 161 doses per hour utilizing walk-in and drive through clinics. Mobile technology, such as hand held radios, was utilized by ADH staff to coordinate the logistics of this event.
9. Pandemic influenza communications encompasses many areas including multiple and redundant channels of two way communications, responsibility for development and dissemination of materials, and plans for media spokespersons. Because the state annually responds to disasters such as tornadoes, floods, and earthquakes which negate the use of telephones and cell phones, the state has assured redundancy in communications through other means.
10. The Health Alert Network (HAN), the Radio Amateur Communications Emergency System (RACES), the Emergency Communications Center (ECC) and the Emergency Operations Center (EOC) work to assure open, clear, and

continuous lines of communication. Training has been provided to ADH and hospital personnel on these various systems.

11. The Arkansas Wireless Information Network (AWINS) uses 800 MHz, handheld radios to maintain communication among hospitals, state and local emergency management, fire services, public health agencies, and the Emergency Operations Center (EOC).
12. Within the EOC, a joint information center is established to disseminate information to the public to assure efficiency and accuracy.
13. During the planning phase, educational efforts have informed the public of non-pharmacologic infection control methods to mitigate transmission of influenza.
14. Arkansas Blue Cross and Blue Shield, a business partner in our planning process, has produced a consumer pamphlet, which was mailed to each of its members.
15. ADH conducted a Non-Medical Containment Pandemic Influenza Functional Exercise in conjunction with the Centers for Disease Control and Protection and the Arkansas Department of Emergency Management. The exercise targeted the northwest portion of the state which houses the University of Arkansas and the headquarters of some of the largest businesses in the state. The premise of the exercise was that an individual flew into the state carrying the virus and had multiple contacts on the airplane. The ADH EOC was activated with intelligence received from state and federal sources. The intelligence was reviewed by ADH physicians and appropriate actions were determined. This simulation involved contacting and treating exposed parties along with containment practices such as cancellation of major events. Communications interoperability was exercised to assure the ability of public safety agencies (e.g. police, fire, emergency medical services (EMS)) and service agencies (e.g. public works, transportation, hospitals) to communicate under these conditions.
16. The Department has created a Speakers Bureau, with presentations given to community-based organizations, faith-based organizations, schools, and volunteer organizations.
17. We have also focused on special populations with physical disabilities and have partnered with Governors Commission on People with Disabilities and the Arkansas Association of the Deaf. We are developing a listserve for our deaf population, 60-80% of whom use blackberries and cellular telephones for communication.
18. We have purchased pandemic influenza educational materials to be disseminated within the five health department regions, the Central Office, and the National Guard. These educational materials are to be used at large community gatherings such as county fairs, health fairs, community festivals, and other community functions. We have developed a pandemic "Shelf Kit" with media materials for the general public as well as the Spanish, Vietnamese, and Marshallese communities.

Our Challenges

Despite the progress our state has made recently, there are a number of questions with which we continue to grapple. These issues include but are not limited to hospital surge

capacity, ethical considerations, sustainability of the business community and continued funding.

Manpower Issues/Hospital Issues. Our hospitals in Arkansas have worked carefully with the Department of Health to address pandemic flu; however, I remain concerned about the ability of the hospitals to operate beyond their current surge capacity. Although we are beginning to take more seriously the issue of alternative sites, we remain concerned about the practical issues of viability given inadequate funding for facilities, equipment and staff. Storage for additional equipment to be used during a pandemic remains a problem.

Staffing during a pandemic will be difficult as some staff will most likely be sick and inpatient beds filled. In urban areas, hospitals depend upon a nursing pool that provides staffing to many different hospitals with individuals who frequently work in multiple facilities. Also, there are physicians, nurses and others who routinely work in hospitals and are members of the National Guard; these individuals are subject to deployment. We need to reconcile primary roles.

Although we are performing an inventory of ventilators and are attempting to provide additional ventilator capacity, we remain concerned about the shortage of physicians, critical care nurses, respiratory therapists and others necessary to care for additional ventilator-dependent patients.

Funding. We need sufficient funding to build on previous investments in preparedness in rural states like Arkansas. We need to build on the federal capacity already given, but not at the expense of local resources. With these thoughts in mind, it is critical that states receive final grant guidance PRIOR to the start of the grant funding period.

The Arkansas Department of Health coordinates with federal, state, and local agencies to implement Pandemic Influenza planning along with legislative bodies, schools, faith-based organizations, and community-based organizations. These entities have different fiscal years and different fiscal policies. Also, county and local agencies tend to be more dependent upon the electoral process; therefore, funding allocations are delayed until elected officials are in place. It has been a challenge to coordinate funding for these agencies within the grant year because it is extremely difficult to work across these boundaries within a one-year funding period.

We need to continue to fund Arkansas' specific needs for pandemic and other all-hazards emergencies.

Anti-Viral Shelf Life. Anti-viral medications that were purchased in 2006 have a five-year shelf life. Two major issues with this purchase are:

1. We are not allowed to use the medications in non-pandemic situations. At the end of five years, the state will have several million dollars invested in out-of-date

medications for pandemic flu. There is no alternative offered to us for rotation of this stockpile.
2. The effectiveness of these anti-virals on the actual pandemic flu strain is unknown at this time.

Communications. We need to effectively coordinate communication among federal, state and local agencies.

1. It is critical that there is coordination between the Department of Homeland Security and the Department of Health and Human Services that needs to occur with partners like ASTHO and NACCHO but in a timely fashion so as to not impede the award process.
2. The most effective delivery of media messages will take place via state-endorsed efforts. States need funding to utilize proven mass media campaigns developed at the federal level by DHHS, CDC and other federal agencies.
3. Currently, Arkansas has no agreements with bordering states with regard to dissemination of medications. We need guidance and conformity around these issues so that citizens living near border areas don't cross borders seeking medications.

Businesses. The anticipated impact on the economy has proven problematic in addressing business concerns. We are experiencing difficulty in convincing the business community to take pandemic influenza and its accompanying issues seriously. It has not been determined how we will address business continuity when we are asking citizens to stay home when they are sick. We haven't adequately addressed the issue of teaching employees when not to come to work. For many Arkansans, the issue becomes an economic one of whether to pay bills or go to work to insure their ability to buy food or medications. We are deeply concerned about business sustainability.

Ethical Issues. In the event of quarantine, we are obligated to provide services to the individuals and/or families who voluntarily quarantine themselves after exposure to disease. They must be assured food, protection, and basic medical services. We must rely on partner organizations for these tasks. We are prepared to provide our responders with personal protective equipment such as gloves and masks as there may be no vaccine to protect them from influenza. In addition, we have a limited supply of existing antiviral doses with diminishing shelf lives. Because we have a limited supply of antiviral medication, we have the added responsibility of determining who should or should not receive these medications. Another important and often overlooked issue is pet care during a pandemic. There is little guidance in this area.

In closing, this is a brief report on the Natural State, the challenges we face and the progress we have made in addressing issues related to pandemic influenza. I would like to thank Congress for Pandemic Flu Preparedness Funding that has allowed the state to address critical infrastructure issues that are unique to rural settings and small states with minimal resources; however, our work is not over. We are a fiercely independent state and sometimes suspect of government intervention. We need to strengthen our

partnerships at all levels. It is my hope that the federal government will take these issues into consideration when determining funding levels for preparedness activities. We need sustainable, level funding now more than ever.

Again, I would like to thank the subcommittee for this opportunity to speak and look forward to working with you in the future.

Testimony for the State, Local and Private Sector Preparedness and Integration Subcommittee of the Senate Homeland Security and Government Affairs Committee
October 3, 2007

Christopher M. Pope, Director
Homeland Security and Emergency Management
State of New Hampshire

In September 2003, the Governor of New Hampshire, the Commissioner of the Department of Safety (DOS) and the Commissioner of the Department of Health and Human Services (DHHS) signed a Memorandum of Understanding that allowed DOS and DHHS to collaborate in the area of emergency preparedness by actually imbedding DHHS staff in the Bureau of Emergency Management. This was an effort to more effectively and efficiently utilize funds from the US Centers for Disease (CDC) and US Department Homeland Security (DHS) to ensure cohesive planning, training and exercising and to minimize any duplication of efforts.

Since that time, the NH Department of Safety, Homeland Security and Emergency Management (HSEM) and the NH Department of Health & Human Services, Division of Public Health Services (DPHS) have been working together on a day-to-day basis in an "all-hazards" approach to emergency preparedness for the state. The HSEM Bioterrorism Preparedness Section staff work on a daily basis with local and state public health officials, public safety officials and other key stakeholders to prepare the state for potential public health emergencies. Some of the specific areas of responsibility for this section include hospital preparedness, disaster behavioral health response, clinic coordination, strategic national stockpile coordination, volunteer coordination, and pandemic planning, training and exercises.

Much of the collaboration between HSEM and DPHS is focused on increasing our capabilities to respond to a public health emergency. NH does not have large built-out county governments similar to other states. NH county's do not have emergency management directors nor do they staff regional Emergency Operations Centers. All 234 communities would report directly to the state during times of statewide disaster. With the release of the Centers of Disease Control (CDC) Pandemic Influenza Funds in 2005 it was evident for the need to develop a regional approach to respond to a pandemic; thus, the development of 19 All-Health Hazards Regions (AHHR) occurred, which includes all 234 NH communities. As of late summer, 14 AHHRs had completed a pandemic influenza annex to their all-hazards public health plan, with the remaining 5 still working on them. The AHHRs have identified Acute Care Centers (ACC), Neighborhood Emergency Help Centers (NEHC), Point of Dispensing (POD) and mass quarantine centers; and they have already developed, or are in the process of developing, plans for how these would be operationalized. All 19 AHHRs have conducted tabletop exercises of their all-health hazards plan for public health response utilizing the US Department of Homeland Security Exercise and Evaluation Program

(HSEEP) guidelines. 95% of Pandemic Phase I funds and over 50% of Phase II funds were distributed to AHHRs to support enhanced regional response plans, including community medical surge. These efforts have increased the capability and capacity of the health care system within these regions, thereby benefiting the hospitals. Several of these regions have purchased medical supplies to support Acute Care Centers to reduce the likelihood that hospitals will be expected to provide them. Because of the number of exercises that have occurred, community-based planners and health care system partners have demonstrated they have a better understanding of the real capacity of hospitals, at this point in time.

The following is a condensed list of cross-cutting lessons learned that have been reported by multiple AHHRs following their tabletop exercises:

1. Increase training to address: continuity of operations planning; municipal health officers' roles; public information planning; NIMS/ICS compliance.
2. Increase knowledge of Multi–Agency Coordination (MAC) center structure and its functions including: activation, staffing, and coordination with local emergency operations centers.
3. Improve planning for populations with functional needs.
4. Improve planning for volunteer recruitment and training.
5. Improve individual and family preparedness.
6. Include applicable state (and federal [?]) statutes in plans.
7. Improve resource listings and contact information in plans.
8. Increase municipalities' engagement in planning and exercising.

Pandemic Influenza Operations Plan:
The State of New Hampshire Pandemic Influenza Operations Plan was submitted to the Centers for Disease Control on April 13, 2007 with input from the following state partners: Department of Health and Human Services, Department of Safety, Department of Administrative Services, Department of Agriculture, Department of Education, Department of Labor, and Department of Resources and Economic Development. The pre-scripted format for the Pandemic Influenza Operations Plan from CDC was followed. On August 10, 2007 we were notified by CDC that six priority areas had been reviewed and their feedback on those areas are as follows:

1. Antiviral Distribution – few major gaps in planning
2. Communications – no major gaps in planning
3. Surveillance/Laboratory – few major gaps in planning
4. Continuity of Operations – few major gaps in planning
5. Mass Vaccination - few major gaps in planning
6. Community Containment/Mitigation – no major gaps in planning

It is unknown at this time when feedback on the remaining parts of the Plan from the other federal partners involved in the review process will be forthcoming. With that information, we will be able to further refine those sections and subsequently schedule exercises to validate our ability to operationalize those areas. At the same time, we

continue to work on our Antiviral Distribution Plan, Medical Surge Plan, Mass Fatality Management Plan and the development of the AHHR capability to respond to pandemic influenza.

Exercises:

Bio-Response 2005 - Pandemic Influenza Exercise – November 2005

New Hampshire Bio-Response 2005, was the Nation's first multi-day exercise series to evaluate a multifaceted, statewide response to a pandemic (avian) influenza outbreak. The New Hampshire Bio-Response 2005 series included two primary focus areas: Strategic National Stockpile (SNS) and pandemic influenza. Each of the exercises in this series were designed and conducted based on Homeland Security Exercise and Evaluation Program (HSEEP) guidelines, as developed by the U.S. Department of Homeland Security (DHS) and adopted by the CDC. All exercises were conducted as "no-fault events," meaning that they were not graded, per se.

1. The SNS National Guard Workshop was successful in accomplishing its objectives to familiarize Receipt, Stage, Store (RSS) warehouse personnel with (1.) the State's SNS Plan, and (2.) their roles and responsibilities, planning, and available resources for setup and sustaining warehouse operations. The workshop brought together State agency representatives from the DHHS, National Guard, State police, and CDC who may respond to a public health emergency requiring request, receipt and distribution of SNS assets.

   This workshop presented a key opportunity for application and refinement of principles and details outlined in the New Hampshire SNS Plan. Workshop discussions occurred, and collaborative relationships were defined, to better prepare New Hampshire for requesting and receiving SNS assets, establishing and maintaining warehouse operations, and responding to and delivering material requests. By participating in this workshop, represented agencies affirmed their commitment to fulfilling a critical emergency response role and to enhancing response capabilities for successful SNS RSS warehouse operations.

2. The SNS Senior Leaders Workshop brought together emergency management, public health, and other government representatives who would be critical responders in a major public health emergency. It effectively achieved its objectives to better inform key decision-makers of their roles and responsibilities for requesting SNS assets, of the communication and decision-making process and how the SNS Plan assists and informs them.

3. The New Hampshire Bio-Response 2005 RSS SNS Warehouse Drill successfully achieved its goals and objectives. Participants were professional in their respective roles and were responsive to exercise challenges. The evaluation of this drill will offer a variety of lessons that each organization can take away as a

positive learning experience. Implementation of the suggested recommendations will serve to strengthen each discipline's proactive and reactive methods regarding future SNS RSS warehouse operations.

4. The Point of Distribution (POD) exercises supporting Bio-Response 2005 were held in Colebrook, Manchester and Portsmouth. The POD sites distributed actual flu vaccine to over 2,000 community members as part of this exercise. Community participants were professional and committed to these exercises and demonstrated the ability to set up their PODs in a timely, effective and efficient manner. Many lessons were learned during this exercise that will be incorporated into their POD plans such as: signage, flow of patients, staffing requirements, security, transportation and communication.

Issues Related to the Statewide Strategic National Stockpile Exercise – April 2007
The New Hampshire Statewide SNS Exercise included a 2-day epidemiological "build-up phase" and three, 1-day exercises designed to prepare New Hampshire for a bioterrorism incident, or other outbreak of infectious disease, by evaluating the readiness and ability of State and local entities to respond to the need to distribute antibiotics to the affected population, in accordance with the *New Hampshire Strategic National Stockpile Deployment and Management Plan.* These exercises were also conducted as "no-fault events."

The major strengths identified during this exercise are as follows:

1. The State of New Hampshire and local participants showed professionalism and commitment in their exercise response.
2. Senior Leadership demonstrated the ability to coordinate the receipt of SNS assets.
3. Personnel received the SNS shipment and disseminated the contents to the appropriate receiving facilities.
4. The three participating towns (Berlin, Concord and Rochester) successfully demonstrated the ability to set up, staff and operate POD sites.
5. The towns engaged their communities in the SNS exercise and identified future partners for emergency response efforts.
6. The Public Health Network served as a model for providing support to cities and towns in public health emergency response efforts.

New Hampshire was able to demonstrate the ability to receive an SNS shipment from the CDC and distribute prophylaxis to the affected public. Based on the areas identified for improvement, future exercises should focus on the following:

1. New Hampshire's ability to provide prophylaxis to first responders and SNS support staff.

2. The State's ability to notify affected towns of the need to activate PODs and provide general information and situational awareness regarding the event.
3. The State's ability to prepare and distribute dosage information and other support materials to the PODs.

Are there outstanding issues from the Nov '05 or April '07 Pan Flu and SNS Exercises that are hampering our efforts to get things done/move forward?

1. The current lack of a statewide reverse notification system was identified as hampering our ability to respond to an emergency in the most efficient and effective manner possible. However, it should be noted that we expect to have such a system on-line with the next few years.
2. The Health Alert Network system needs to be revitalized.
3. Liability and Workers' Compensation for volunteers during drills needs to be addressed.

Issues Related to Interstate and International Regionalization

The State of New Hampshire is proud of its independence and the resiliency of its residents. However, like all small states, we also recognize that we do not have the appropriate resources to deal with every emergency, disaster or catastrophe that we might face. In fact, all of the New England states recognized this many years ago. Together, an organization of emergency managers was formed to address the common issues and concerns of our states; and, in fact, the organization has expanded to now include the states of New York and New Jersey. This organization is the North Eastern States Emergency Consortium, commonly referred to as NESEC. NESEC permits regional problems to be addressed in a regional fashion—with a solution that best fits all. Too often in the past, states have planned as if an event doesn't cross a state's border, or as if a neighboring state won't be impacted by the results of an event. Also, too often, resources have been identified in state emergency operations plans that may also have been identified by other states. Although NESEC partners with FEMA Region I, it is independent; i.e., the agenda and discussion focuses on the states' initiated topics and the respective directors' concerns.

NESEC is such a successful organizational model that the state public health community identified it as the most appropriate with whom to become an adjunct for continued progress in planning, preparing, responding and mitigating public health crises. This identification occurred during a regional pandemic flu exercise held in Rhode Island in 2006. How to find and procure needed resources, how to communicate with each other and how to totally integrate with emergency management prompted their request to be affiliated with NESEC. Although the Board of Directors has approved that affiliation, the financial resources needed to conduct the responsibilities associated with this group have not, yet, been acquired.

Just as emergencies, disasters and catastrophic events don't recognize state borders, they also don't recognize international borders, particularly where the border exists as part of the same land mass. The International Emergency Management Group (IEMG) was formed at the behest of Northeastern States' Governors and the Eastern Canadian Provinces' Premiers, following a devastating ice storm. This group was charged with finding and developing a way to provide mutual assistance among the jurisdictions for managing any type of emergency or disaster. It was charged with developing plans and training and exercising those plans for events that could affect the region.

There is, now, an operational manual, which was successfully exercised in the Fall of 2006 in Vermont. The scenario had a bio-terrorism, public health basis and involved all of the participating states and provinces. A subsequent Improvement Plan was developed in the HSEEP format. Communications exercises also occur prior to each meeting, i.e., twice a year. And, a formal means/process to share resources has been developed, following the model of the Emergency Management Assistance Compact, commonly known as EMAC, which falls under the auspices of the National Emergency Management Association.

The member states and provinces include: Maine, Vermont, New Hampshire, Massachusetts, Connecticut, Rhode Island, Quebec, New Brunswick, Nova Scotia, Prince Edward Island and Labrador/Newfoundland. Their bi-annual meetings are split between the United States and Canada. The governance includes US-Canadian Co-Chairs for the group, as well as for each committee. And they focus on topics such as: expediting assistance at the border during an emergency; partnering with the EMAC; and finding funding sources to defray the costs of administrative support.

At one point, a grant had been secured through FEMA to assist in these efforts. That grant paid the costs of administrative support staff that NESEC graciously hosted and assisted. That funding has not been available for the last few years. In partnering with our neighboring country, we have also learned that money from either federal government cannot be expended, or be construed as being expended, in/for the partner nation. This, too, has made cost-sharing between the entities very difficult.

In addition, the United States contingent has been seeking Congressional approval for many years for the IEMG Assistance Memorandum of Understanding, also known as the International Emergency Management Assistance Compact, which would give it the full force of law. Although this has been attempted a number of times, it still has not received the needed notice to move it through both the House and Senate for approval.

It is interesting to note that even without Congressional approval, the IEMG has served as a model for other cross-border states and provinces. The international side of FEMA has even brought representatives from California and Arizona to a meeting, to explore a similar partnership along our southern border. And, we have also provided a copy of the by-laws to a Guam emergency management representative, who wants to explore

whether this type of agreement could be crafted between themselves and Japan—their closest neighbor who might be able to quickly provide resources during a disaster.

Progress in NH

To provide you with an overall consensus of our progress and concerns in New Hampshire, we requested input from our local All-Health Hazard Regions and Emergency Management Directors, as well as our staff. They have identified the successes, as follows:

1. Training of health professionals in emergency preparedness and response topics, especially increasing familiarity with ICS and NIMS on the medical side.
2. Building cooperation, collaboration and partnerships among municipal departments and health and human service agencies through planning, educational opportunities, networking and exercising.
3. The development and acceptance of the State Functional Needs Guidance. This Guidance supports Emergency Operations Plans at both the state and local levels by providing ways to build the capability to accommodate and assist individuals with everyday functional challenges in an emergency.
4. The development and use of the State Disaster Animal Response Guidance.
5. 10 logistics trailers, each with supplies needed to mount an emergency prophylaxis/vaccination clinic, have been strategically located throughout the state.
6. The number of identified sites for rapid medication/vaccination dispensing has increased from approximately 25 to over 70.
7. Regional planning has improved.
8. Exercising plans to identify potential issues.
9. Creating educational opportunities for business and non-profit communities in the region.
10. Increased individual preparedness.
11. Strengthening the state's ability to respond to any emergency.
12. Establishment of All Health Hazard Regions has improved our planning efficiency.
13. Becoming more proactive.
14. Better access to state resources/experts, etc.
15. Ability to address gaps in "regular day-to-day" needs of responders (e.g., development of CERT teams, etc).

The successes for hospitals include:

1. Implementing Hospital Incident Command System (HICS).
2. Implementing decontamination & First Receiver programs.
3. Doubling isolation capacity statewide.
4. Procuring Personal Protection Equipment caches.
5. Conducting state-wide hospital exercises.
6. Continually working toward improving hospital surge capacity.
7. Implementing communications upgrades.

8. Ongoing commitment to community collaboration
9. Procuring evacuation equipment.
10. Procuring pharmaceutical caches
11. Developing an MOU for a Hospital Mutual Aid Network.

What do we need from the federal government to improve our efforts at the local/state level?

1. Support for small towns to up-date/develop their Local Emergency Operations Plans, either directly to the community for hiring a consultant or other staff member, or to the state to provide someone to put the plan on paper and organize the meetings and information.
2. Ear-mark funding for disability agencies and organizations to participate in planning and exercises. (For example, interpreters for deaf and hard-of-hearing individuals to participate in a 90-minute, planning meeting can cost between $200 and $250.)
3. Cooperative funding between DHHS and Homeland Security to fund POD's where communities share a border with other states (or Canada). It is extremely difficult to prepare, plan and fund for POD activations without cross-border funding.
4. One of the biggest issues that needs to be resolved at the State/Federal level is liability, malpractice and workers' compensation coverage for events and for non-events, e.g., training, drills and exercises. This is a large hindrance at present and prevents the recruitment and retention of Medical Response Corps personnel, engineers and other volunteers.
5. Consistent and effective funding, including for the purchase of needed supplies and equipment for response.
6. Better federal guidance and communication, especially involving standardization of common tasks, procedures and forms and organization and rationalization of available resources, both print and online.
7. Confidence from the federal government that the SNS assets can be delivered in a timely manner (12 hrs) in the middle of the winter during a large snowstorm, or other weather event.
8. Clear understanding of goals specific to healthcare that recognizes their unique role in community response.
9. Targeted funding for varied public awareness campaigns.
10. Guidance on how to store items purchased.
11. Inventory Management Systems and training.

In addition to what has already been covered, input has also told us that the state, if not the federal government, should look at:

1. Permitting the temporary relaxation of mandated "standards of care" and the associated documentation, if necessary, to reduce total processing time and increase POD throughput.

2. Waiving certain licensing requirements temporarily to allow non-medically trained personnel to carry out essential POD functions.
3. Relaxing the "scope of practice" requirements in order to provide more flexibility in the use of available medically-trained personnel.
4. Relaxing or waiving medication labeling requirements to support efforts to reduce processing times.
5. Provide storage for cots and other undated supplies and equipment at or near the planned Acute Care Center site.
6. Provide funding for ventilators.
7. Ensure consistent guidance relative to needed supplies, as well as to the command and control of public health emergencies.

Local governments, states and the private sector have made great strides in their preparedness and response capabilities in public health crisis. However, we are still not at the acceptable level of readiness that our citizens expect and deserve. States and local governments continue to need funding and leadership from the federal government as we continue to build these capabilities.

Statement of

Yvonne S. Madlock, MAT

Director

Memphis & Shelby County Health Department

Tennessee

On behalf of the

National Association of County and City Health Officials

Before the Ad Hoc Subcommittee on State, Local and Private Sector

Preparedness and Integration

Committee on Homeland Security

United States Senate

Hearing on "Pandemic Influenza: State and Local Efforts to Prepare

October 3, 2007

Good afternoon, Chairman Pryor, Senator Sununu, and distinguished Members of the Subcommittee. It is my pleasure to address you today on behalf of the nation's 2800 local public health departments, who work on the front lines to protect their communities from pandemic influenza, as well as a multitude of other public health threats. I serve on the Board of Directors and am Vice-Chair of the Metro Forum of the National Association of County and City Health Officials and have had an opportunity to learn from my colleagues across the country. In Memphis and Shelby County, where I have served as health director for 12 years, I have been deeply engaged in pandemic influenza preparation and response activities. Today, I am happy to report to you on the progress made by local health departments and their community partners. I will also discuss how we believe the federal government can improve current national pandemic influenza preparedness.

The combined efforts of local health departments and our colleagues in first response will determine the initial, as well as the ultimate impact of an influenza pandemic on the people of the United States. The success of our plans relies on the crucial linkages that we are building between local public health departments and a range of governmental and community partners. Relationships among responders in many disciplines and sectors across our local communities, regardless of who their federal counterparts may be, are growing more robust and better coordinated. If we are to protect the health and well-being of our communities adequately, we have no choice but to reach out, engage, communicate and cooperate with our local partners. This activity requires a sustained effort by all partners because our job of training, exercising, and improving will never be complete.

We all recognize that pandemic influenza will not respect geographic borders. The Memphis and Shelby County Health Department is a grantee for HHS' Cities Readiness Initiative and we partner in multi-jurisdictional planning for rapidly distributing pharmaceuticals in a public health emergency. We will lead the distribution of medication to an eight-county area that includes jurisdictions in Arkansas, Mississippi and Tennessee. This initiative gives us the opportunity to strengthen our collaborative efforts with our neighbors, particularly those across state borders, something that's been long overdue

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 including intentional or naturally occurring infectious disease outbreaks; chemical, explosive or radiologic accidents or attacks; weather-related disasters; earthquakes; or other unexplained events that affect the health of the public. .

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 our homeland. Regardless of the nature of the threat,

there is a core of universal public health response capabilities for which all local health departments across the country are planning, training, exercising and engaging in a process of continuous evaluation and improvement.

The Memphis, Tennessee Metropolitan Statistical Area (MSA) has a combined population of 1.25 million. We are concerned about many potential threats. Our jurisdiction is home to the world's largest and busiest cargo airport and the enormous jet fuel tanks required to service the planes, as well as a major river port, over 400 trucking companies, a refinery, and two major bridges over the Mississippi River. Public health has a role in responding to a catastrophe involving any of these, as well as a lead role in addressing pandemic influenza or any disease outbreak with the potential to cause preventable illness and death. Many of the capabilities and relationships we build as we prepare for all hazards are pertinent to our pandemic influenza preparation.

Our capabilities were tested when we helped take care of thousands of evacuees from Hurricane Katrina. Memphis and Shelby County mounted an enormous response. We mobilized our health department staff and volunteers to provide 24-hour medical and nursing care in the shelters, to keep track of available hospital beds and make proper referrals for displaced citizens who needed hospitalization, to monitor for disease outbreaks among the evacuees, to ensure pharmaceutical needs were met and to do just about anything else that needed to be done. This experience taught us, among other things, the critical importance of unified incident command and good communication among responders.

Just as there is a public health role during natural disasters, so are there roles for other responders in public health emergencies. Local health departments do not and cannot stand alone. All planning and response is and must be integrated with other local entities, most notably public safety first responders, but also state, federal and non-governmental partners. In May of this year, we conducted a large pandemic influenza tabletop exercise that brought together 86 people representing the range of community partners in preparedness, including elected officials, public safety responders, hospitals, the airport authority, schools and colleges, media, community service organizations and businesses. By working through a hypothetical scenario of an influenza outbreak, each sector had an opportunity to identify its strengths, as well as areas for improvement. For example, we're confident of our ability to coordinate centrally through our Emergency Management Agency and to utilize our well-defined disease surveillance system. Areas for improvement include outreach to businesses, the preparedness of nursing homes, and communication to culturally diverse segments of our population.

Public health has learned the importance of a shared command and management framework to a coordinated community emergency response. With its strong foundation in the Incident Command System (ICS), 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, including pandemic influenza. Adoption of NIMS is facilitating the integration of language,

organizational and service models and even certain cultural aspects of public safety by public health professionals.

Every staff member of our health department has been trained in NIMS and learned this new language and approach. We have grown accustomed to planning and exercising within an incident command system. We now understand these concepts as well as our other partners in public safety. The health department also participates in a multi-disciplinary, multi-jurisdictional Urban Areas Homeland Security Initiative (UASI) working group to enhance overall regional emergency preparedness and response capabilities.

Key Elements of Front Line Pandemic Influenza Preparedness

1. DISEASE SURVEILLANCE

The purpose of a strong disease surveillance system is early detection in order to create time in which to intervene and eliminate or mitigate threats, as well as to monitor the progress of an epidemic. In local public health, practical disease surveillance traditionally means a system by which clinicians in private practice or in hospital settings can rapidly detect and report a novel flu virus or a patient who is suspected to have a reportable disease or an unusual case presentation 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 universal and automatic reporting of diseases or suspicious symptoms, but such capability will be immensely challenging in our intensely diverse and complex national environment. We cannot wait, nor can we depend solely on technology when so much is at stake.

Local health departments are the 'boots on the ground' elements of our nation's disease surveillance system. My health department receives and responds to thousands of infectious disease reports each year. We also use three methods of surveillance for early recognition of an illness or outbreak of disease. These include monitoring emergency room visits, school absenteeism records, and sales of over-the-counter drugs.

We receive emergency room data daily from four hospitals and upload the data into the Early Aberration Reporting System, a system developed by the Centers for Disease Control and Prevention (CDC). When the system detects a higher number of cases of a particular illness than we would expect, we begin a preliminary investigation. We are also in constant communication with infectious disease practitioners at hospitals to identify possible disease outbreaks. We plan to recruit all the hospital systems in our area to participate. During a pandemic, our epidemiologists would watch for an unusual number of people having syndromes associated with influenza.

We also search for disease outbreaks by monitoring daily electronic reports by 80 drug stores in Shelby County of sales of antidiarrheal medications and cold remedies. In

addition, Shelby County schools send us absentee records for about 47,000 students in 49 schools so that we can investigate further if there are unusual spikes in absenteeism.

These systems help us detect disease outbreaks of all kinds, in addition to their utility for detecting, tracking and stopping an influenza outbreak. Using them, we have successfully identified unreported cases of West Nile virus, meningitis, and three gastrointestinal disease outbreaks.

2. COMMUNITY AWARENESS & SELF-SUFFICIENCY

One thing that we understand about a pandemic is that there will never be enough hospital beds to take care of the sick. We can predict that we will be asking both the sick and the well to stay home to help stem the spread of pandemic influenza. But we also know that our community needs early education, rapid communication and preparation so they will understand this if a serious epidemic occurs. Reaching every Memphis and Shelby County resident in a meaningful fashion is a huge task. We can't do it all at once, but we work at it consistently through community outreach and use of the media because we believe that community understanding and cooperation will be absolutely essential in reducing the toll of a pandemic.

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 and/or quarantine persons, to control private property, or otherwise to intervene in private activities. All these would be unprecedented actions, requiring enormous pre-planning.

Our department is currently working with CDC, Homeland Security, the county airport authority and state and local public health authorities to address how we would deal with a situation where incoming passengers would need to be quarantined. Our first challenge is to identify a location for sheltering those in quarantine, and we expect to use our Hurricane Katrina experience in planning how best to care for passengers.

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 of the planning, staffing and public information systems necessary to promptly distribute them to all priority populations in the county. In Memphis and Shelby County, we have a detailed plan for using 20 Points of Distribution (PODS) to distribute antiviral or

antibiotic medications in a public health emergency. The plan has roles for schools, fire departments, police departments, emergency medical systems, hospitals, Medical Reserve Corps volunteers, and the local transportation authority.

While we've not experienced a pandemic flu, local health departments have had parallel experiences and exercises that have tested our ability to provide mass vaccine and medication distribution. During the 2004 seasonal flu vaccine shortage, with delayed shipments causing the public to become extremely anxious to get their flu shots, our health department administered 2,875 doses to seniors and other vulnerable citizens in two days, using both staff and Medical Reserve Corps volunteers.

People are Key to Preparedness

Prior to 9/11, many local health departments were open only during conventional business hours. Unlike fire or police departments, there was no tradition, structure, or funding for operating 24/7. That has changed. Now we all have 24/7 coverage and an ability to call out our staff regardless of the hour. But we do it mostly by increasing expectations for existing staff.

One characteristic of all the operational capacities needed for effective pandemic influenza planning I have described above is that they are labor-intensive. While we do need to make certain capital purchases in public health, such as communication equipment and personal protective gear, the bulk of our costs are for people. It is people who do the collaborative planning in the cities and counties and work closely with their state counterparts. It is people who learn new skills for their new roles in preparedness. It is people who educate the community. It is people who reach out to hospitals, businesses, schools, and all the non-governmental organizations whose help we need to prepare our communities for a pandemic.

The structure and funding of the nation's pandemic influenza preparedness efforts simply do not recognize this reality. A NACCHO survey showed that the average grant received by local health departments nationally for all-hazards public health preparedness declined by 20% from FY 2005 to FY 2006. Supplemental federal funds for state and local health department work specifically in pandemic influenza preparedness will terminate in August 2008. We are deeply worried that, as federal priorities change, our ability to sustain the workforce that must continue the complex job of preparedness will diminish. Our funding for all-hazards public health preparedness has been eroding steadily.

Volunteers in Preparedness

In Memphis and Shelby County we are particularly proud of our progress in developing a trained cadre of volunteers who would help us in a pandemic or other emergency. We have a Medical Reserve Corps of more than 2,700 registered volunteers, including physicians, nurses, pharmacists, dentists, mental health professionals, and many others. MRC members have a variety of skills and fill many roles. All trained volunteers have picture identification cards and have received basic orientation and preparedness training.

We have used them in our Katrina response and mass influenza vaccination drives. Each volunteer is familiar with our basic response plan and understands where to report in an actual activation. Our MRC volunteers also fill non-emergency roles to help us serve our community – as "buddies" for seniors applying for Medicare Part D, in community health fairs, and most recently during this summer's heat crisis.

The MRC program, a project of the Office of the U.S. Surgeon General, is an invaluable resource not just in Memphis and Shelby County, but also in communities nationwide. Following the tragic bridge collapse in Minnesota, three local MRC units provided psychological first aid and support to families of the missing. In Indiana, a local MRC assisted the local health department with a lead screening clinic in response to the recent mass recall of contaminated toys. Following the severe weather this spring in Kansas, three MRC units spent more than 250 hours helping the local health department deliver more than 2,000 tetanus shots to community residents. Today, there are more than 700 MRC units and 145,000 medical and non-medical volunteers organized and trained to address a wide range of challenges from public health education to disaster response.

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 cooperation and coordination between preparedness planners at the Federal level and those working at the local and state levels. In addition, the Department of Homeland Security (DHS) 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.

NACCHO has long been concerned that DHS planners, unlike their state and local counterparts, have little appreciation for the local public health role in pandemic influenza response and for the kinds of local operational realities I have described above. The vast assortment of DHS committees and task forces have only a smattering of public health representation and the opportunities for meaningful input have been scant. We respectfully suggest that, while including representation from the Department of Health and Human Services in DHS work is important, it is not an effective substitute for gaining the input of public health departments who are doing the operational planning every day.

For example, we share the frustration of many local and state officials about their lack of representation in the revision process for the National Response Plan (NRP), which will govern response to pandemic influenza, as well as all other national emergencies. DHS tasked 12 workgroups to focus on specific issue areas of the NRP. One of these workgroups focused on 'State and Local Roles and Responsibilities," but had only six

state government representatives and no local government representatives, compared to a group of approximately 40 federal representatives. None of the state representatives were public health officials. If DHS intends the new National Response Framework to address pandemic influenza effectively, local and state governmental public health experts should be engaged at the beginning, not during a comment period at the very end.

The input of local responders in public health and every other discipline of public safety must be brought to bear on DHS plans and guidance in a manner that enables serious listening and timely input. That is the only way to bridge the federal gulf between traditional emergency response and public health emergency response. At the local level, we believe that public health and its public safety partners understand the true meaning of "all-hazards" preparedness, as well as the special place that pandemic influenza planning has within that context. We strongly urge improvements in this regard at the federal level.

Federal agencies need to collaborate in sending 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. HHS guidance for public health emergency preparedness has been incorporating many dimensions of the NRP, such as required training in the National Incident Management System. In general, however, federal agencies are developing and disseminating uncoordinated, fragmented, and dissimilar plans for addressing pandemic influenza.

For instance, recently released HHS/CDC guidance for state and local preparedness lists eight required critical tasks to prepare for isolation and quarantine and HHS is working on performance metrics. DHS has a published a Target Capabilities List for Isolation and Quarantine that includes over 60 critical tasks, with associated performance measures. The result is a mixed message to local planners.

In addition, the HHS 2007 grant guidance for pandemic influenza includes specific requirements for health departments. The 2007 DHS guidance for state and local emergency management offices does not address pandemic influenza. Joint, fully consistent requirements for planning and exercising by DHS and HHS grantees for pandemic influenza would be a more useful approach.

Finally, while much time is spent asking local and state emergency personnel to understand how the national response 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 that is right for every corner of this diverse country. A top-down, 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.

Thank you, on behalf of all the nation's local health departments and the citizens we serve, for your concern and leadership.

Question#:	1
Topic:	GAO report
Hearing:	Pandemic Influenza: State and Local Efforts to Prepare
Primary:	The Honorable Mark Pryor
Committee:	HOMELAND SECURITY (SENATE)

Questions and Responses for the Record from Dr. Tilman Jolly

Question: As we discussed at the hearing, a GAO report from August of this year reported that there had only ever been one national multi-jurisdictional pan flu planning exercise. I was very encouraged to hear that you had known about or participated several at the state or regional level. I wanted to follow-up on those exercises and additional ones you mentioned were planned for the future. What are the mechanisms for DHS and HHS to coordinate and evaluate the exercises as they happen and after they happen? Do you help states by working with them to feedback and assess "lessons learned?"

Answer:

DHS and HHS coordinate joint exercises in a variety of ways, including through participation in the bi-weekly Sub-Policy Coordination Committee on Exercises and Evaluation, hosted by the HSC. Coordination is continued outside of the Sub-PCC meetings through frequent contact and coordination on issues pertaining to exercises of interest to both Departments.

In addition, per the National Exercise Program, the Homeland Security Exercise Evaluation Program (HSEEP) is the methodology to be utilized by Federal Departments and Agencies. The use of a common methodology eases the coordination of exercises being conducted either by different D/As, or exercises conducted cooperatively between them. Coordination and evaluation of state and local pandemic influenza exercises is in its nascent stage; however HSEEP methodology will be used as we progress with these efforts. Specifically, HSEEP focuses on the following mission areas:

- Standardizes exercise design, development, conduct, and evaluation for all (National-level, Federal, State, local) exercises
- Establishes common language and concepts to be adopted and used by various agencies and organizations
- Meets the National Response Plan (NRP) and National Incident Management System (NIMS) goals
- Synchronizes all exercises in the Nation
- Provides tools and resources for States and local jurisdictions to establish self-sustaining exercise programs

HSEEP utilizes the following tools to evaluate exercises and capture lessons learned:

- Exercise Evaluation Guides (EEGs)
    - Promote consistent capture of exercise performance

Question#:	1
Topic:	GAO report
Hearing:	Pandemic Influenza: State and Local Efforts to Prepare
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    - Act not as a scorecard, but as an observations-collection tool
    - Assist evaluator in development of After Action Report – Improvement Plan (AAR/IP)
  - AAR/IP Template
    - Provides outline for development of final AAR/IP
    - Promotes consistent format across Federal, State, and local after action reporting and improvement planning

Pandemic Influenza exercises and the Pandemic Influenza Exercise series (PIX) remain a priority for the National Exercise Division of FEMA. The first Principal-Level Exercise (PLE) of FFY08, PLE 1-08, will focus specifically on Pandemic Influenza, and the various issues associated with a PI outbreak in the United States. The scope of the exercise is currently being refined and will be finalized before exercise play occurs in February and March of this year.

The Regional Pandemic Influenza Exercises will occur following PLE 1-08, in order to maximize lessons learned and issues identified in the conduct of that exercise. These exercises will occur in each of the five PI regions identified by DHS, and will involve Regional representation (from state and federal partners) as well as activity at the Headquarters level. The current scope of the exercise focuses on interaction between the Regions and Headquarters, although that may shift depending upon the lessons learned and issues identified during PLE 1-08.

Outside of the PIX, other exercises are ongoing. The Office of Health Affairs will be conducting a PI Principal Federal Officials (PFO) workshop in late November, 2008, in order to provide the first test of communications capabilities between Regional and National-level PFO's. Further, FEMA Regions I and II are co-hosting both a PI workshop and a PI functional exercise in November and December, 2007, to examine the regions response to a PI outbreak at the local level. Lessons learned from each of these exercises will also be incorporated into the PIX.

The Department of State recently conducted a PI exercise at the Assistant Secretary level focusing on international issues related to an OCONUS PI outbreak; any relevant issues identified during this exercise will be included in subsequent PI exercises.

After action reports from all of these exercises are reviewed by interagency groups to inform future planning and exercises.

Question#:	1
Topic:	GAO report
Hearing:	Pandemic Influenza: State and Local Efforts to Prepare
Primary:	The Honorable Mark Pryor
Committee:	HOMELAND SECURITY (SENATE)

The National Exercise Program (NEP) mandates the use of the Homeland Security Exercise and Evaluation Program (HSEEP) and the Corrective Action Program (CAP) to identify and resolve major issues from exercises and promotes the use of Lessons Learned Information Sharing system (LLIS) for distribution of lessons learned applicable and appropriate to the broader emergency management community. CAP is a formal process and methodology that defines the roles and responsibilities for identification, development, prioritization, tracking, and analysis of corrective actions following exercises or real-world incidents that should receive consideration within the Department or the Interagency dependent upon the issue. It is an overarching program that refers issues to appropriate organizations—such as the Office of Health Affairs—for priority action. The *CAP System* is a web-based tool that enables Federal, State, and local emergency response and homeland security officials to implement the CAP process.

Question#:	2
Topic:	State plans
Hearing:	Pandemic Influenza: State and Local Efforts to Prepare
Primary:	The Honorable Mark Pryor
Committee:	HOMELAND SECURITY (SENATE)

Question: As I'm sure you know, states were required to submit pandemic flu preparedness plans in July 2005 as a condition of receiving federal grants. All 50 states and the District of Columbia have done so. However, the plans vary quite a bit in the topics they cover and in their level of detail. Fewer than half, for instance, designated a person in the state authorized to declare a public health emergency. Only 10 out of 51 plans addressed how they would meet the need for health workforce surge capacity, and very few looked at the impact of pan flu on non-health services. Do DHS and HHS provide feedback to states on these plans? Is there any way for states to check a central data-base or compare notes with other states?

Answer:

The process of review of state plans has been capably led by HHS, with significant input from DHS and other agencies. HHS is currently providing feedback to the states on their plans. Based on review of the plans, an interagency body will develop revised guidance that the states will be able to use to improve and align their plans in 2008. We have not developed a searchable database for comparison of state plans, although we will be soliciting comments from the states on the revised plan guidance in the coming months. As we move forward with this process, a method of state-to-state comparison of plans is one of our goals. This review mechanism should not be unique to pandemic influenza, and should take advantage of new and emerging technologies.

Question#:	3
Topic:	requirements
Hearing:	Pandemic Influenza: State and Local Efforts to Prepare
Primary:	The Honorable Mark Pryor
Committee:	HOMELAND SECURITY (SENATE)

Question: A common refrain from states is that HHS and DHS have different requirements and performance measures for health preparedness grants, and that the grant applications are due at different times, and that they are distributed in different ways. Are there any plans to coordinate these HHS and DHS requirements?

Answer:

In June 2005, DHS and the U.S. Department of Health and Human Services (HHS) established a Joint Grant Program Steering Committee to facilitate the integration of preparedness activities across State and local preparedness programs managed by both Departments. This committee is staffed by key program offices from both Departments, including the DHS Grant Programs and National Preparedness Directorates within FEMA and the DHS Office of Health Affairs and the HHS Office of the Assistant Secretary for Preparedness and Response, the Centers for Disease Control and Prevention, and the Office of the Surgeon General.

The mission of this grants coordination committee supports requirements outlined in the White House Federal Response to Hurricane Katrina: Lessons Learned report as well as the newly issued Homeland Security Presidential Directive 21: Public Health and Medical Preparedness, which directs the Secretary of Health and Human Services, in coordination with the Secretary of Homeland Security, to develop and maintain processes for coordinating Federal grant programs for public health and medical preparedness using grant application guidance, investment justifications, reporting, program performance measures, and accountability for future funding in order to promote cross-sector, regional, and capability-based coordination.

Through this committee and ongoing coordination among program offices, DHS and HHS will continue to work with State and local applicants to support and, where possible, integrate preparedness activities regarding programs managed by both Departments. This includes supporting a range of activities that are achieved through collaboration at the State and local level among public safety, emergency management, health and medical communities, and non-governmental entities, such as:

- Developing clear public health emergency plans that delineate who will do what during each stage of the protection, prevention, response, and recovery phases

Question#:	3
Topic:	requirements
Hearing:	Pandemic Influenza: State and Local Efforts to Prepare
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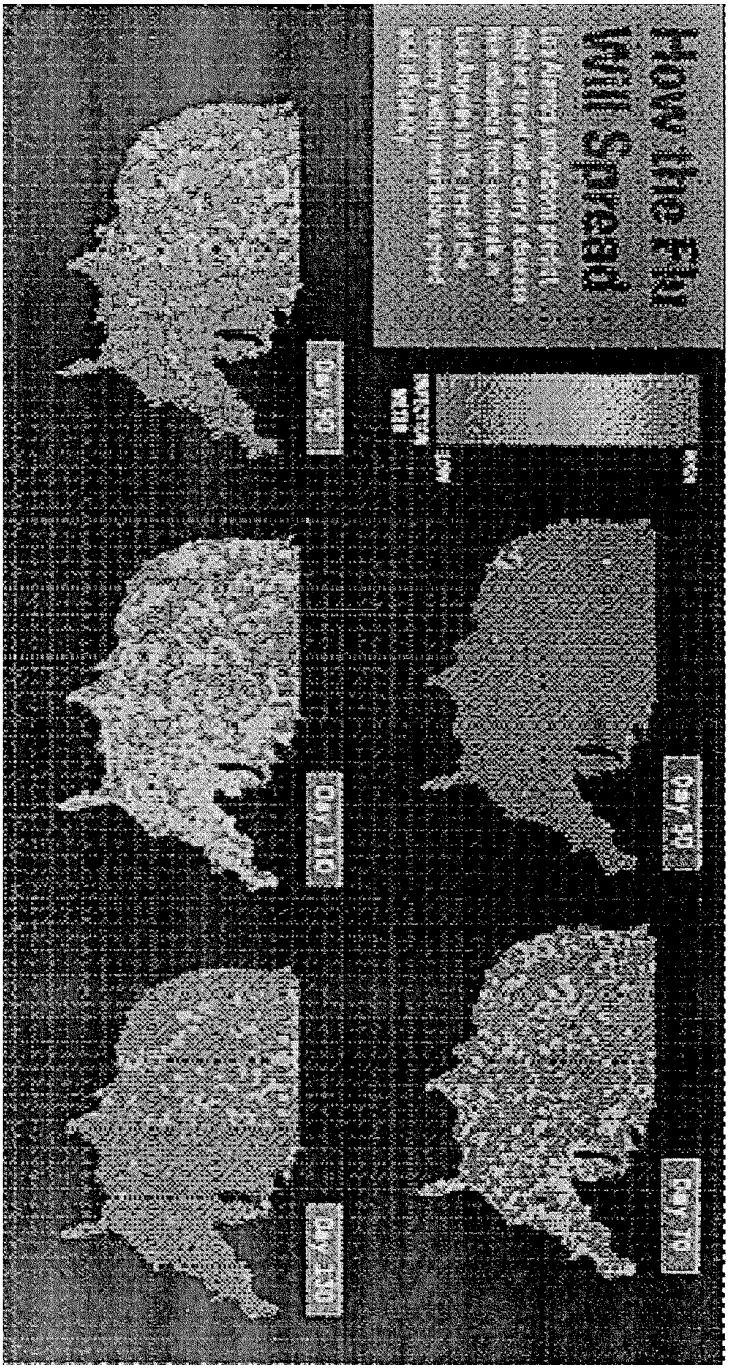
- Identifying the specific competencies needed to complete the tasks associated with the operational plan
- Implementing effective training programs that specifically support the competencies related to the public health emergency plan
- Conducting joint exercises to meet multiple requirements from various grant programs
- Engaging special needs populations and/or those who represent them in preparedness planning and exercise activities
- Conducting joint training for local decision-makers (including government administrators, health and medical professionals, and emergency managers) on issues of joint concern, such as pandemic flu preparedness or risk communication

Given that the application periods and allowable activities are frequently driven by statutory or regulatory provisions or by policy, the alignment of application deadlines and award cycles is a longer-term issue that must be carefully considered by both Departments and by Congress. However, emphasizing a coordinated approach to programmatic activities under the grants, particularly those that may overlap across Departments, is a primary focus of the grant steering committee's work and the guidance development process for all relevant components.


How the Flu Virus Spread
DAY 1
DAY 7
DAY 14
DAY 21
DAY 28
DAY 30
DAY 60
DAY 90
DAY 120
DAY 150
KEY
MILD
MODERATE
SEVERE