

**Testimony
of the
American Hospital Association
before the
United States Senate
Special Committee on Aging
“Preparing for Pandemic Flu”**

May 25, 2006

Good morning. I am Nancy Donegan, director of Infection Control at the Washington Hospital Center for 22 years. I am a registered nurse with a master’s degree in public health. On behalf of the American Hospital Association’s 4,800 hospitals, health systems and other health care organization members, and our 33,000 individual members, we appreciate this opportunity to present our views on hospitals’ preparations for a pandemic influenza.

The Washington Hospital Center is the largest hospital serving the Washington D.C. metropolitan area and is part of MedStar Health, a seven-hospital system in the Washington-Baltimore area. We are an acute care hospital, Level I trauma center with 900 beds and seven intensive care units.

As director of Infection Control, I oversee programs to reduce the risks of patients becoming infected as a consequence of medical treatments, personnel becoming infected with HIV and hepatitis infections while caring for patients, and preventing transmission of possible bioterrorism agents and pandemic agents such as the Coronavirus of SARS and the pandemic influenza. In addition, I have served on the District of Columbia’s Bioterrorism Committee, the group that is currently writing the District’s Pandemic Preparation Plan.



Public health officials across the world believe a new influenza pandemic will occur, but its timing is unknown. In other words, the question is “when” not “if” a pandemic will occur. Given the rise of avian flu in birds in numerous nations, public health leaders are rapidly preparing for a possible influenza pandemic. Pandemic influenza is but one of several possible disasters for which hospitals need an “all-hazards” preparedness plan.

America's hospitals are committed to providing quality care to the patients and communities they serve. Part of that commitment means continuing to provide every day care for their communities as well as preparing for natural and man-made disasters and emergencies. Hospitals have long had disaster plans in place that have been carefully developed and tested. These plans are multi-purpose and flexible in nature because, as we have recently witnessed, the number of potential disaster scenarios is large. As a result, hospitals maintain "all-hazards" plans that provide the framework for responding to a range of events from conventional natural disasters to the threat of terrorist attacks to pandemic outbreaks natural and man-made disasters.

Our testimony will briefly discuss the capacity demands of a pandemic influenza, examine what’s needed to make hospitals ready for a pandemic and how the lack of federal funding is hindering hospitals’ preparedness. We also will discuss the pandemic plan at the Washington Hospital Center and outline the AHA’s recommendations for the federal government’s role.

Defining Surge Capacity – Contrasting a Pandemic with Other Emergencies

Because hospitals play a critical role in the event of a disaster, they must be able to accommodate the surge in demand for care in order to screen, stabilize and provide definitive care for affected persons. Traditional disaster planning has largely concentrated on “fixed occurrence” events, such as those created by transportation accidents or the terrorist attacks of September 11th in which there are a finite, and usually relatively small, number of victims requiring hospitalization. However, emerging infectious diseases, such as avian flu, require that hospitals be able to update their disaster plans to address prolonged periods of intense demand for services. Hospitals must plan to effectively extend their ability to deliver

uninterrupted medical care in the face of a prolonged event involving large numbers of victims, such as a pandemic disease.

Because of the dual nature of disasters – fixed versus prolonged events – hospitals and their communities must plan to create surge capacity for each of these two distinct types of events. Hospitals can increase their patient care capacity in relatively short periods of time by “surging in place.” This involves rapidly discharging existing patients, cancelling scheduled elective procedures, and taking steps to increase the number of patient care staff in the facility in order to make additional staffed hospital beds available for incoming disaster event patients. Immediately following the attack on the Pentagon, the Washington Hospital Center rapidly reduced its hospital census as we anticipated delivering care to hundreds of workers injured from that attack. And, the anthrax bioterrorism attack on the Hart Senate Office Building in 2001 caused a surge in demand for care in our institution. More than 400 people from the U.S. Capitol and the Brentwood post office required screening and a large number required hospitalization and diagnostic work up to determine if they were infected with anthrax. We created an elaborate just-in-time clinic for patients, and educational program to reassure our worried workers.

While this type of strategy can provide a temporary ability to increase patient care capacity, most hospitals cannot sustain such a surge for extended periods of time. Individual facilities would quickly become overwhelmed if the disaster involved large numbers of victims presenting over a prolonged period of time. A pandemic is likely to impact the country for a period of several months to as long as 18 months, and to hit all parts of the country and other countries at the same time. We do not anticipate having the ability to call in health care workers and equipment from other locations as we can when a localized emergency, regardless of its size, hits.

Pandemic influenza would require the creation of “community surge capacity,” involving the development of alternative care facilities. This type of community surge capacity is complicated and costly to achieve and involves advance planning for logistical support, the development of protocols, and the determination of specific mission goals. Communities must

plan for this contingency using the advanced designation of facilities that can be used to accommodate patients, perhaps under more austere circumstances than would be faced in everyday medical care.

The U.S. National Strategy for Pandemic Influenza Implementation Plan anticipates that a pandemic will require a response that surpasses the ability of even the federal government, and that it will require responses from communities and businesses themselves. However states, localities and the private sector have limited resources and are struggling with their own financial barriers. The national plan also suggests that staffing for hospitals will be augmented by expansion of the Medical Reserve Corps and the Commissioned Corps of the Public Health Service. However, it is unlikely that this effort would be adequate to meet the need faced by hospitals simultaneously in many locations. Additionally, the option is, at this point, unclear in magnitude and timing. Hospitals cannot reliably include this availability in their plans.

It is also important to note that in planning for surge demand for care due to a disaster, decision-makers must also consider the ongoing need to continue to deliver basic health care services. Hospital services will be required to maintain routine delivery of emergency care, such as delivering babies, dealing with traumatic injuries and sudden acute illness.

Are U.S. Hospitals Ready? – Lack of Funding for Hospitals Is Hindering Readiness

To know where you are going you need to know where you are. Currently, federal funding for pandemic influenza preparedness has multiple streams, none of which lead directly to hospitals. Last year the President requested \$7.26 billion for pandemic influenza preparedness; however, P.L. 109-148, the *Department of Defense Appropriations Act of 2006*, provides \$3.8 billion for avian flu preparedness – \$3.46 billion below the President's request. Most of the funds, \$2.75 billion, are appropriately targeted to support core preparedness activities, such as expanding the domestic production capacity of influenza vaccine, developing and stockpiling of pandemic vaccine, stockpiling of antivirals and other supplies for the Strategic National Stockpile. These investments are critical; however, some, such as manufacturing and stockpiling antiviral agents and vaccine, come with the uncertainty of whether they will be accomplished in time for a pandemic or whether they will be effective in preventing and treating infections when needed.

Of the remaining funds, only \$350 million is intended for upgrading state and local response capacity, which encompasses pandemic response plans by state and local public health officials. **No amount is specifically targeted to improving hospital preparedness for pandemic influenza.** More recently, H.R. 4939, the *Emergency Supplemental Appropriations Act for Defense, the Global War on Terror, and Hurricane Recovery, 2006*, which has been approved by the House of Representatives and Senate, includes an additional \$2.3 billion for pandemic preparedness, with \$300 million earmarked for upgrading state and local capacity. Once more, there is no direct allocation for hospitals' pandemic preparedness.

Emergency readiness requires a significant investment in hospital staff and resources. But the ability to meet these investment challenges is compromised by the significant financial pressures facing hospitals. Today, approximately a third of hospitals lose money on operations – with Medicare and Medicaid under-funding being a key driver. Another third of hospitals operate at or near the break-even point. This means that two out of three hospitals are not able to invest significantly in surge capacity. On top of under-funding by government payers, hospitals face other financial pressures: labor costs continue to rise as hospitals increase wages to attract scarce workers; the number of uninsured patients also continues to grow, contributing to greater levels of uncompensated care; and hospitals face skyrocketing costs for medical liability insurance, pharmaceuticals and clinical information systems.

A hospital's ability to deliver optimal medical care in the setting of any disaster event, regardless of its cause, is in large part contingent upon an immediate availability of key medical equipment, supplies and pharmaceuticals, as well as adequate staffing. However, due to financial pressures, hospitals have adopted just-in-time supply chains for their equipment and supplies. As a result, in a sustained disaster such as a pandemic, hospitals would face an almost immediate shortage of critical supplies such as ventilators, personal protective equipment for staff, drugs and other supplies. In addition, most hospitals routinely operate at or near full capacity and have only limited ability to rapidly increase their workforce.

The funding provided to hospitals through the National Bioterrorism Hospital Preparedness Program (NBHPP), a program authorized by *the Public Health Security and Bioterrorism Preparedness and Response Act of 2002*, has been a good first step toward increasing the readiness of the nation's hospitals and their communities and developing improved strategies for dealing with all kinds of threats facing our communities. Preliminary estimates in 2002 suggested that hospitals would require approximately \$11 billion to obtain a basic level of "all hazard preparedness." Since then, Congress has appropriated about \$500 million per year for the program and the fiscal year 2007 request is \$487 million. This amounts to \$2.1 billion over five years, or about \$100,000 per hospital per year to fund preparedness. However, the amount that hospitals have actually received is significantly less due to dollars allotted for the federal government's administration of the program and overhead funds that the state grantees have retained.

The Center for Biosecurity at the University of Pittsburgh Medical Center, however, has estimated that the minimum costs of realistic readiness for a severe (1918-like) pandemic are at least \$1 million for the average size hospital (164 beds). The component costs to achieve minimal preparedness include:

- Develop specific pandemic plan – \$200,000
- Staff education/training – \$160,000
- Stockpile minimal personal protective equipment – \$400,000
- Stockpile basic supplies – \$240,000
- TOTAL = \$1 million per hospital

Using these estimates, the total for the nation's 5,000 general acute care hospitals for initial pandemic preparedness is about \$5 billion. The Center for Biosecurity estimates recurring annual costs to maintain preparedness to be approximately \$200,000 per year per hospital. These figures exclude stockpiling antivirals, since there is a separate national plan to acquire these drugs. In addition, this estimate does not include funds for the purchase of expensive equipment such as mechanical ventilators, since it is not clear that extra ventilators would be useful if there were no trained personnel to operate them.

To date, the federal hospital preparedness program has not provided the level of funding required to establish adequate “all-hazards” acute care surge capacity. As a result of the relative paucity of funding, only piecemeal solutions have been developed to address the problem of developing surge capacity. The amount of available funding for supplies and equipment has not been adequate to support the purchase and use of items of significant cost, such as ventilators, intravenous pumps, or cardiac monitoring equipment. For example, *The New York Times* recently reported that the national supply of ventilators, which would be critical for caring for patients in a pandemic influenza outbreak, falls far short of their estimated need, even considering the numbers that are being stockpiled by the federal government. The Center for Biosecurity estimates the cost to double the number of ventilators in the country, using safe but inexpensive equipment, is \$1 billion.

But again, the limiting step in surge capacity planning, namely the ability to recruit, retain and deploy staff to the bedside during any given crisis, including staff to manage a surge of patients on ventilators, has not been fully and comprehensively addressed, despite some progress in the development of systems to identify and register in advance health professionals willing to volunteer for service in a disaster. As noted above, national plans to augment hospital staffing by expansion of the Medical Reserve Corps and the Public Health Service Commissioned Corps, while admirable, are unlikely to provide adequate staff to meet the need faced by many hospitals simultaneously experiencing patient surges across wide geographic areas. Additionally, since the Medical Reserve Corps and other advanced registration programs for volunteers often recruit their medical volunteers from hospital staff, it is unlikely that the volunteers’ “home” hospitals would permit their staff to deploy elsewhere if there is an expectation that they would be needed in their own hospital.

Furthermore, planning and funding for medical surge capacity remain far behind the other elements of the nation’s tactical response to creating a secure homeland. And given the very real concerns regarding an impending influenza pandemic, communities must focus on priorities for building such capacity that goes beyond the purchasing of beds, a metric which is too simplistic, and of little use, in creating the sort of capacity that is truly needed.

The U.S. National Strategy for Pandemic Influenza Implementation Plan states “preparedness requires infrastructure and capacity, a process that can take years.” Hospitals do not have the means to create infrastructure or capacity with current funding.

The federal government must help protect the nation by providing greater resources to hospitals to meet the challenges of emergency readiness and ensuring that those resources are made available in a timely manner. In addition, given what Americans need from our nation’s hospitals, today is a time for investment, not cutbacks.

Pandemic Planning at the Washington Hospital Center

At the Washington Hospital Center, we have developed a generalized plan to prepare us for any disease with epidemic or pandemic potential that can be transmitted through droplets or potentially via an airborne route. We refer to these as Human Epidemic Respiratory Diseases, or “HERD” diseases.

The pandemic plan at the Washington Hospital Center is based on medical and scientific understanding of influenza and SARS and on logistical considerations learned from care of tuberculosis patients, and preparation for other outbreaks and possible bioterrorism-related events. It follows the three pillars of the National Implementation Plan: (1) preparedness and communication; (2) surveillance and detection; and (3) response and containment. Our plan encompasses educational programs, and pre-packaged sets of diagnostic tools and personal protective equipment.

Preparedness and Communication. The hospital has a committee of representatives from the hospital administration, emergency department, nursing, infectious diseases, infection control, pharmacy, respiratory therapy, materials management, security, public affairs, occupational health, human relations, laboratory, and others who meet regularly to assure our plan fits the most recent projections for possible outbreaks and is built on tools such as the modeling available through the Centers for Disease Control and Prevention (CDC) for likely impact.

Internally, communicating plans and disaster updates presents a challenge in a hospital. Because of round-the-clock coverage and staffing shortages, nurses and other personnel are seldom available for meetings. Many physicians are not employed by the hospital, have unpredictable schedules, and are not part of the hospital-based communication system. In our HERD plan, we use both high-tech methods with messages sent through various means to information groups, and low-tech messages delivered in small groups and postings such as at garage gates. A rapidly changing emergency represents a significant communication challenge.

Externally, the hospital has developed multiple reporting and communication systems with public health, and other health care providers in the region. All internal and external methods require practice drills and continued improvement methods.

Surveillance and Detection. The HERD plan uses patient screening concepts developed in the SARS preparation. During a pandemic, all entry points, including the emergency department, clinics, and admitting departments will need to screen patients based on epidemiologic definitions provided by the World Health Organization and CDC. Computerized and paper-based tools for reporting cases to the public health department and to the hospital clinical areas have been developed by the Washington Hospital Center because no standardized methods for such surveillance currently exist.

Unlike other emergencies, contagious diseases put the medical workers themselves at risk. Workers and their families will be exposed and infected to the same degree as the public, and workers are likely to have increased risk of significant exposure from the care they provide to the ill.

Hospitals will need to screen all workers on a regular basis during a pandemic episode. In our HERD plan, we have detailed methods to have workers self monitor and self report symptoms of respiratory infection. As early preparation, we have used a self-assessment kit with a rapid flu test to ready our workers for this type of process during a pandemic.

In our HERD plan, we have created prepackaged laboratory kits to assure that in the early stages of a pandemic period, symptomatic patients are screened completely for likely infectious agents or for alternative causes. These kits provide instructions as pathways for emergency physicians, medical residents, respiratory therapists and laboratory workers.

Response and Containment. The hospital HERD plan establishes an incident command structure so that all responding departments know their roles and responsibilities. The best response would include the use of effective vaccine and/or therapy. Current plans address the likelihood that antiviral therapy will be available for prophylaxis and treatment. However, this assumption may prove invalid when the true nature of an influenza pandemic or pandemic from other microorganism becomes known. Especially in the absence of effective vaccination, prophylaxis and therapy, infection control measures are the only strategies left to prevent transmission in a hospital.

Patients with suspected or proven disease must be isolated to prevent transmission to other patients and personnel. The current Health and Human Services Pandemic Influenza Plan does not recommend airborne isolation because influenza viruses are primarily transmitted by droplets. However, in preparation for an unknown pandemic infectious agent or a known airborne infectious agent, we would need negative pressure isolation rooms. Such rooms require air to flow into the room. Rooms can be modified for use as temporary isolation rooms using HEPA-filtered negative air machines. Isolation could require health care workers to wear, at minimum, masks, gowns, gloves, and possibly a head covering.

In the Washington Hospital Center's HERD plan, we have articulated exactly how to get an ample supply of the needed equipment. Equipment has been prepackaged to be rapidly delivered to areas of the hospital that will need it. From the Toronto SARS experience, we have learned that protective equipment would rapidly become contaminated and that we must set up systems to handle all aspects of equipment provision, removal, disinfection or destruction. These processes are complicated and expensive. If, the current worst case scenario in which pandemic spread of Avian Influenza H5N1 with frequent human to human

transmission, we could need to set up fail-safe, monitored systems to ensure that our workers do not become infected.

Anticipating an increase in the number of patients, the Washington Hospital Center HERD plan has used federal funding to double the number of negative pressure rooms available for in-patient isolation. We recognize that even with this increase in capacity, we would be unable to effectively isolate the number of patients anticipated in a pandemic involving an unknown pandemic infectious agent or a known airborne infectious agent.

ER One. The Washington Hospital Center's all-hazards planning extends beyond pandemic planning. With funding from the Office of Public Health Emergency Preparedness at the Department of Health and Human Services, we have created *ER One* – the nation's first all-risks-ready scalable emergency care facility of the future. *ER One* provides multi-fold surge capacity by building in design features to handle mass casualty events, and the *ER One* National Demonstration Project will be a national training facility providing testing, teaching, training and disseminating of surge capacity and emergency readiness best practices through the *ER One* Institute. I would be glad to provide the Committee further detail on this innovative effort.

The AHA's Recommendation for Pandemic Planning on a National Level

It is not clear at this time whether there will be treatment options for a pandemic illness, and it is not clear whether a vaccine will be available. It also is not clear whether adequate supplies of antiviral medications will be available. The most optimistic scenario is that there will be adequate and effective vaccine available to vaccinate all workers and patients and adequate supplies of effective antiviral medications to care for those who are infected and exposed.

The AHA supports the federal government's efforts to increase the stockpile of antiviral drugs, increase research on non-egg vaccine production and develop a prototype vaccine for avian flu. In addition, an allocation plan for antiviral drugs and vaccines must recognize the importance of, and provide priority access to, these countermeasures for hospital staff, physicians, and emergency medical personnel. The government should become the sole purchaser of pandemic

influenza vaccine to assure adequate production and controlled distribution. The country also needs to increase the number and capacity of domestic vaccine manufacturers. Finally, Congress should provide liability coverage for researchers, manufacturers, providers and practitioners.

Without these assurances, we depend, as did caregivers during the SARS outbreak, on infection control behaviors. Outbreaks of influenza have been prevented or controlled through a set of well-established strategies that are clearly outlined in the HHS Pandemic Influenza Plan. These include early detection of influenza cases in a facility; isolation of infectious patients in private rooms or cohort units; use of appropriate barrier precautions during patient care, as recommended using Standard and Droplet Precautions (eye protection, masks, gowns, gloves); employing hand hygiene; and administrative measures such as restricting visitors, educating patients and staff, and cohorting health care workers assigned to an outbreak unit. In addition, supplemental precautions for health care workers involving the use of special personal protective equipment may be indicated during the performance of aerosol-generating procedures. Air systems need to have the capacity to provide negative airflow or filtered air, as needed.

Another difficult problem associated with the inadequate supply of vaccine, antiviral medications and other supplies and equipment necessary for treating persons with respiratory illnesses will occur if hospitals must set priorities for influenza vaccine, antiviral medications and other supplies needed for treatment. Traditionally, the elderly have been identified as the group with the greatest risk. Recent dialogue about this issue has suggested that with limited resources, there may be other approaches to resolving use of scarce resources. Hospitals will look to local, state and federal public health authorities, including the CDC, the Institute of Medicine and other groups, for guidance and consensus building to assist with these ethical complexities.

Conclusion

The recent experiences of the last several years and the information about pandemic influenza now available leads us to recognize our severe limitations in being able to assure our patients,

personnel and communities that we can provide the services needed at the time of a pandemic. We recognize that with our own resources, we will not be able to provide enough trained personnel, enough personal protective equipment, enough therapy, or enough ventilators, particularly in a pandemic involving prolonged periods of intense demand for services.

We believe that federal funding should be allocated for pandemic preparation that would be directly applicable to hospitals and would be safe guarded from being used for other worthy causes such as amplifying the public health infrastructure and amplifying short-term emergency preparedness operations.

Pandemic influenza is but one of the several possible disasters for which hospitals need an all-hazards preparedness plan. The AHA will continue to work with Congress and the Administration to forge ahead toward a shared goal of improving the overall preparedness of America's hospitals and communities.