Statement of
Chancellor Jeff Gold, M.D.
University of Nebraska Medical Center, Omaha, Nebraska
before the Committee on Energy and Commerce
Subcommittee on Oversight & Investigations
Hearing on
"Update on U.S. Public health Response to Ebola Outbreak"
United States House of Representatives
113th Congress
November 18, 2014

Chairman Murphy, Ranking Member DeGette and members of the subcommittee, thank you for the opportunity to discuss the Ebola outbreak and the nation's response and how the nation can maintain a state of readiness to respond to future highly infectious diseases. I am Dr. Jeff Gold, Chancellor of the University of Nebraska Medical Center. My testimony today focuses on the challenge of dealing with Ebola and the nation's readiness to respond to highly infectious diseases.

The United States is dealing with a serious public health crisis with the Ebola outbreak in Africa. It is a crisis that the United States has the expertise and know-how to contain and help resolve. One of the most pressing questions facing our country is how best to leverage that know-how to ensure that our nation's health professionals and institutions are properly trained and ready to combat future Ebola and Ebola-like threats.

The University of Nebraska Medical Center (UNMC) and our hospital partner, Nebraska Medicine, have successfully treated Ebola patients. We have been recognized as a national resource for our readiness to provide care for Ebola patients and also our ability to provide training on Ebola and highly infectious diseases. The UNMC readiness is based upon more than nine years of preparation, protocol development and team training to deal with highly infectious deadly diseases. Hundreds of hospitals across the nation have contacted UNMC asking how to prepare their facilities and staff if Ebola arrives in their community. Emory University hospital is experiencing similar inquiries. University of Nebraska Medical Center and Emory University have been collaborating closely with the Centers for Disease Control and HHS on readiness and treatment.

One step UNMC took to respond to the immediate national demand for information and training was we worked with Apple to convert our nine years of protocols and procedures into easily accessible and completely downloadable multimedia materials and videos for health care providers. That was accomplished in one week. It is available from Apple iTunes, as well as on the UNMC website, and can be accessed from any personal computer or a smart phone at no cost. UNMC released a second version intended to help consumers understand Ebola. To access the materials, search "iTunes Nebraska Ebola Method" on any computer. This is helping address the immediate need for information. More than 1,300 clinicians have enrolled in the training and more than 6,000 have downloaded the UNMC YouTube video about personal protective equipment.

Also, UNMC has assisted in providing consultations for Bellevue Hospital in New York on how to deal with therapies, screening and isolation when they had a patient arrive at their hospital.

You might ask why Nebraska was thrust into the national spotlight. The UNMC Biocontainment Unit opened in 2005 following the 9-11 attacks, the 2001 Anthrax attacks on Congressional offices and other similar incidents, and the SARS outbreak in Canada in 2003. We recognized that with the commonness of international travel, it was possible that the global spread of a highly infectious disease was a possibility. Nebraska decided it needed to be ready to respond to deadly viruses. The UNMC Biocontainment Unit team has trained in our specially designed biocontainment unit for more than nine years. Our Unit has written protocols and procedures, and rigorously drilled with local emergency first responders, state emergency management and military units. UNMC has written protocols on decontamination procedures for facilities, ambulances, labs, and more. UNMC spent a lot of time considering the response plan if a community has to respond to a highly infectious disease. Our team was uniquely prepared to meet public health threats posed by Ebola and other infectious diseases and to share those best practices with our nation's hospital providers.

University of Nebraska is also a Department of Defense authorized University Affiliated Research Center which specializes in developing Medical Countermeasures to Weapons of Mass Destruction, including highly infectious viruses. We have a history of conducting research in this area and responding to requests from the military.

What has become obvious to those of us who treat Ebola patients is that a national readiness plan is absolutely necessary to prepare the nation's hospitals. If Ebola continues to escalate, or more importantly, if the nation faces a different highly infectious disease, the nation's healthcare system must be ready to respond.

The UNMC Biocontainment Unit is one of four such units in the nation. The number of treatment units in the nation must increase, but even more importantly a national readiness plan that trains healthcare providers in those units must be established.

This training will vary depending on the location of the hospital, its resources, and the risk factor of that hospital receiving a patient. The hospitals that are being considered as potential treatment centers will require much more intensive training than a smaller community hospital that may only need to be correctly trained in screening procedures, isolation procedures and use of protective clothing. The University of Nebraska Medical Center and Emory University are working with the CDC and HHS on how training might be most effectively delivered, but it must take place and begin soon.

The risk to the healthcare providers and members of the hospital community in dealing with patients who have Ebola demands urgency in launching a national training program. A key part of training is building the team that must rely on each other to safely deliver the treatment to patients. The training of hospital personnel must include everything, such as addressing special facility needs and special lab needs, and the training must have a particular focus on the management of waste and consumables that must be decontaminated before they leave a biocontainment unit.

As Congress considers the Emergency Supplement, I urge that it include provisions to establish a national training program and a national readiness strategy, preferably managed by the front line existing Biocontainment Units, like UNMC and Emory that have the experience that providers are relying on for information.

National Training in Ebola and Highly Infectious Diseases

Developing a tiered training program for U.S. hospitals is important to preparing the nation for whatever comes after Ebola. Those hospitals will need to be trained and maintain their skill levels. Rigorous training is a vital part of readiness. UNMC is a key contributor to that training. Hundreds of hospitals have contacted UNMC asking for assistance and guidance. More than 30 hospitals have asked to come to Omaha to be trained by UNMC. UNMC trained Johns Hopkins at UNMC two weeks ago and UNMC is essentially serving as a consultant to Hopkins as they prepare to build a biocontainment unit. UNMC and Emory are collaborating to develop a common curriculum that could be used with CDC to train the future designated treatment hospitals.

A National Ebola Training Center is part of the Supplemental funding request. UNMC and Emory have been working with CDC and HHS to develop the training. It needs to be funded.

Training Should Include Setting Up an Accreditation Program

UNMC firmly advocates that an independent national accreditation program be created as a way to ensure that hospitals that are trained, maintain their level of readiness. UNMC has set up national independent accreditation programs for other specialties and could easily set up this one if funds are provided.

Annual Maintenance Funding for UNMC Biocontainment Unit

CDC has provided an annual maintenance funds for the unit at Emory. I am aware that in recent years Emory's annual funding has been reduced substantially. UNMC has never received similar annual funding. With the increased services and resources UNMC and Emory are providing and will continue to provide, both institutions should be on contracts as we collaborate with the agencies to develop and implement the national training of other hospitals.

Funds to Expand Number of Treatment Centers and Existing Biocontainment Units

Funds will be needed to increase the number of treatment centers and increase the capacity to respond to Ebola or a future highly infectious disease outbreak. HHS asked UNMC to expand our facility. To do so, UNMC will need construction funds and equipment funds to increase our capacity. UNMC built its Biocontainment Unit with University and Hospital funds and federal funds contributed by the State of Nebraska. UNMC has existing contingent plans to expand if needed, but it would require federal funds. It would be helpful if Congress would include language to specify that existing biocontainment units leading the treatment and training be granted priority capital construction funding.

Reimbursement for Ebola Patients Costs Not Covered by Insurance

Treating an Ebola patient is very costly and consumes an enormous amount of staff time and consumables. At UNMC, it has cost around $1.16 million to treat the two patients directed to us

by the federal government. Treatment costs vary based on the severity of the patient when they arrive, but the cost is well beyond the normal costs incurred for an intensive care patient. In addition to the direct costs, we also take additional beds in the ward out of service when an Ebola patient is being treated which is a direct financial cost to the hospital. We estimate having to take those additional beds out of service has cost $148,000 so far.

I urge Congress to approve funding and policies supporting full reimbursement of the cost of care for these unique cases that are not recoverable from insurance policies. These are patients that federal government directed to UNMC and Emory. A mechanism to provide payment for the unpaid portions of the treatment seems fair.

Guaranteeing financial sustainability for UNMC, Emory and future regional centers that may be designated to care for Ebola virus disease cases is critical to containing any future outbreak of an infectious disease. As I mentioned, caring for patients with Ebola virus disease requires additional staff and resources, far beyond usual care.

Last, I wish to briefly share a few key lessons that UNMC and Nebraska Medicine have learned through our experience by being on the front line of this war against Ebola:

- Patients and their families come first – whether that involves the provision of care, protecting their privacy or gaining permission to conduct experimental research.
- Caregivers cannot become distracted due to the special national attention placed on these patients. The national attention is, however, critically important in communicating in an accurate and timely way with our global community.
- Teamwork is essential for caregivers. Putting one's life in the hands of well trained, interdisciplinary, and passionate experts is essential.
- Safety is paramount. Rigorous study of and compliance with constantly emerging protocols of care are mandatory.
- Promoting a culture of quality that is equal to the risk undertaken is expected of every individual team member. Training, seeking new knowledge continuously produced in real time, and appropriately questioning decisions must be routine.
- Providing accurate and timely information to our colleagues in the health professional community and the public is essential.
- Conducting research and sharing findings in a timely fashion is imperative. New discoveries in the treatment and management of the disease as well as information in such areas as patient triage, waste management and patient transportation are critical to combating the disease and preventing its spread.
- Advancing community understanding about the disease is an important and often overlooked service – especially in non-English speaking neighborhoods. Continuous messaging is essential in combating rumors and allaying unrealistic fears.

- Special attention must be placed on caring for the health of caregivers – especially mental health. Normal conditions of stress are intensified in this setting.
- Transparency, accuracy, and timeliness of sharing information are critical factors in working with media, who are important allies in creating accurate and realistic narratives about the disease and its victims.
- The current resources available within the United States to care for patients being repatriated with a specific infections diagnosis or diagnosed within the United States are extremely limited and need to be scalable with sustained expertise and maintenance of quality facilities.
- Mechanisms for support of the maintenance of this expertise and specifically for the care of suspected or diagnosed cases are currently not available and need to be addressed.

We have the expertise and know-how to contain Ebola and other infectious disease threats. However, in order to do this we must ensure that our nation's health care professionals are adequately trained, properly equipped, and rigorously drilled. America's academic health centers, along with our federal, state and local government allies, must work collaboratively to ensure that proper treatment protocols and procedures are widely proliferated. Our team of biocontainment professionals at UNMC and Nebraska Medicine are uniquely prepared to answer this call in the fight against Ebola and other infectious diseases.

I have attached for your reference a copy of the UNMC Biocontainment Patient Care Unit brochure.

Thank you for the opportunity to comment.

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Providing care for patients with highly contagious diseases, the biocontainment unit is an environment that maximizes the safety for staff and the community at large. A full spectrum of care is provided – from quarantine to intensive care treatment – for patients of all ages. The unit is designed to handle infections such as viral hemorrhagic fevers (eg, Ebola virus), as well as smallpox, SARS, monkeypox and avian influenza, whether acquired in a bioterrorist attack, in a laboratory accident or as a naturally occurring infection.

The threat of *bioterrorism* in the United States is very real.

Nebraska is prepared.

The Nebraska Biocontainment Patient Care Unit is a collaborative project involving Nebraska Department of Health and Human Services, The Nebraska Medical Center and University of Nebraska Medical Center. It is one of only a few biocontainment patient care units in the United States and is the largest with a 10-bed capacity. In addition to providing medical care for patients with hazardous diseases, the unit also has active research and outreach training programs for the region.

Unit personnel consist of a highly trained staff of physicians, nurses, techs, infection preventionists and respiratory therapists who have special training in disaster management, cardiac life support and bioterrorism. They work full-time in other areas of The Nebraska Medical Center but remain on call to report to the unit promptly.

The Nebraska Biocontainment Patient Care Unit was dedicated by Julie Gerberding, MD of the Centers for Disease Control and Prevention in 2005. In the event of a public health threat, the unit may be activated by Nebraska Department of Health and Human Services and the NBU medical director.

THE NEBRASKA BIOCONTAINMENT PATIENT CARE UNIT IS THE LARGEST BIOCONTAINMENT PATIENT CARE UNIT IN THE UNITED STATES.

EQUIPMENT AND **CAPABILITIES**

The Nebraska Biocontainment Patient Care Unit is a secured area with a self-contained, negative-pressure airflow system.

Other features include:

- Negative air flow with greater than 15 air exchanges per hour
- High-Efficiency Particulate Air (HEPA) filtration system
- Secured access, double door air lock main entrance
- Separate staff entrances and exits
- Staff decontamination shower
- Pass through sterilizer to disinfect materials leaving the unit
- Dunk tank to decontaminate lab specimens leaving the unit
- Video phone for patient communication
- Close proximity to the Nebraska Public Health Laboratory (NPHL) BSL III Lab
- HEPA patient transport system allows for safe transport of patients to the unit

Nebraska Biocontainment Patient Care Unit
984550 Nebraska Medical Center
Omaha, NE 68198-4550

Philip W. Smith, MD
Medical Director
Nebraska Biocontainment Patient Care Unit
402.559.8650
pwsmith@unmc.edu

Angela Hewlett, MD
Associate Medical Director
Nebraska Biocontainment Patient Care Unit
402.559.8650
alhewlett@unmc.edu

Shelly Schwedhelm, MSN, RN
Director, Emergency Department, Trauma and Preparedness Services
402.559.8766
sschwedh@nebraskamed.com

Kate Boulter, RN, BS
Lead, Registered Nurse
Nebraska Biocontainment Patient Care Unit
402.559.4727
kboulter@nebraskamed.com

Joseph Acierno, MD, JD
Chief Medical Officer
Nebraska Department of Health and Human Services
402.471.8566 (business hours)
402.471.2400 (after hours)

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