Dr. Kent Brantly

Senate Committee on Health, Education, Labor and Pensions
Senate Appropriations Subcommittee on Labor, Health and Human Services, Education, and Related Agencies

Ebola in West Africa: A Global Challenge and Public Health Threat
September 16, 2014

Chairman Harkin, esteemed Senators, and fellow guests of this committee, I am grateful for the opportunity to testify in front of you today about the unprecedented Ebola virus outbreak that has already claimed thousands of lives in West Africa and threatens to kill tens of thousands more.

On October 16, 2013, I moved to Liberia with my family to serve as a medical missionary at ELWA Hospital in the capital city, Monrovia. I worked as a physician to support the woefully inadequate healthcare system of a country still struggling to recover from a brutal civil war. Resources were limited, and we often saw patients die of diseases that would be easily treatable in the United States. It was a challenging job to provide quality care even before the Ebola virus tore through the country.

In late March, we learned that there were cases of Ebola in our region, and we began preparing our staff and the ELWA facility so that we would be ready to care for patients in the safest way possible should the need arise. Three months later, our hospital had the only available Ebola Treatment Unit, also known as an isolation center, and I was one of two physicians to treat the first Ebola-infected individuals in southern Liberia.

From June 11 to July 20, the number of Ebola patients we saw increased exponentially. During that time, my organization, Samaritan's Purse, took over responsibility for all direct clinical care of those infected with the disease. I was appointed Medical Director of what would become the only isolation unit in the Monrovia area.

We opened a new, larger Ebola Treatment Unit and brought in patients from the government hospital. During that time, the number of cases continued to grow at an incredible rate. Within days, our 20-bed facility was housing 30 patients, and there was no end in sight. The disease was spiraling out of control, and it was clear that we were not equipped to fight it effectively on our own. We began to call for more international assistance, but our pleas seemed to fall on deaf ears.

As the Ebola virus continued to consume my patients, I witnessed the horror that this disease visits upon its victims—the intense pain and humiliation of those who suffer with it, the irrational fear and superstition that pervades communities, and the violence and unrest that now threatens entire nations.

Then on July 23, I started to feel ill. Three days later, I learned that I had tested positive for Ebola Virus Disease. I became a patient, and I came to understand firsthand what my own patients had suffered. I was isolated from my family, and I was unsure if I would ever see them again. Even though I knew most of my

caretakers, I could see nothing but their eyes through their protective goggles when they came to treat me. I experienced the humiliation of losing control of my bodily functions and faced the horror of vomiting blood—a sign of the internal bleeding that could have eventually led to my death.

I received the best care possible in Liberia, and I am grateful for the team that worked tirelessly to keep me alive despite a severe lack of medical resources and other limitations. I was then evacuated to Emory University Hospital where I was given world-class medical treatment and eventually beat the odds to become one of the few who recover from Ebola. As a survivor, it is not only my privilege but also my duty to speak out on behalf of the people of West Africa who continue to face unspeakable devastation because of this horrific disease.

This unprecedented outbreak began nine months ago but received very little attention from the international community until the events of mid-July when my friend and colleague, Nancy Writebol, and I became infected. Since that time, there has been intense media attention and therefore increased awareness of the situation on the ground in Liberia, Guinea, Sierra Leone and neighboring countries. The response, however, is still unacceptably out-of-step with the size and scope of the problem now before us.

On September 7, President Obama committed U.S. military support in the fight against Ebola in West Africa. He also is requesting an additional $88 million for the Centers for Disease Control to send in more personnel, equipment, and laboratory supplies. This is great news, and I applaud his willingness to enter into this battle with us. Now it is imperative that these words are backed up by immediate, decisive action. We need more than just a 25-bed Ebola Treatment Unit and training for local security forces. To control this outbreak and save the lives of thousands of West Africans—and possibly even more Americans—we need the U.S. to take the lead in providing large treatment facilities, skilled personnel, medical supplies, logistical support, mobile laboratories, and security. We also need to implement innovative community programs to stop the spread of the virus.

In a recent Washington Post op-ed, the International President of Doctors Without Borders, Joanne Liu, called for "a large-scale deployment of highly trained personnel who know the protocols for protecting themselves against highly contagious diseases and who have the necessary logistical support to be immediately operational." She went on to say, "Private aid groups simply cannot confront this alone." I agree with her assessment of the desperate need for medical boots on the ground.

Treating Ebola patients is not like caring for other patients. It is grueling work. The personal protective equipment (PPE) we wore in the Ebola Treatment Unit becomes excruciatingly hot, with temperatures inside the suit reaching up to 115 degrees. It cannot be worn for more than an hour and a half. Because of the elaborate safety protocols involved in treating an Ebola patient, each one takes an average of 30 minutes of time from a team of three to five people. It is easy to see that a significant influx of medical personnel will be needed to adequately care for the thousands of people that epidemiologists now are predicting will fall victim to the disease in the coming weeks.

The U.S. military also must establish an "air bridge" for the delivery of critically needed personnel and supplies. Right now, those who are fighting this disease are forced to rely on commercial airlines even as flights into and out of the affected countries are scarce and unreliable. Our military is the only global force with the capacity to immediately and effectively mobilize this kind of logistical support. We cannot turn the tide of this disease without regular flights of personnel and large cargo loads of equipment and supplies.

The use of our military is a legitimate and defensible request because if we do not do something to stop this outbreak now, it quickly could become a matter of U.S. national security—whether that means a regional war that gives terrorist groups like Boko Haram a foothold in West Africa or the spread of the disease into America. Fighting those kinds of threats would require more from the Department of Defense than what I am asking for today.

A surge in medical treatment capacity also must include the deployment of all available mobile laboratories and increased funding for more to be built as quickly as possible. During my time in Liberia, ELWA Hospital was the only Ebola Treatment Unit for all of Monrovia and the surrounding area—serving a population of more than one million. The laboratory we used to confirm Ebola Virus Disease in patients was 45 minutes away and inadequately staffed. A patient would arrive at our center in the afternoon, and their blood specimen would not be collected until the following morning. We would receive results later that night at the earliest. This means that the turn-around time to positively identify Ebola cases was anywhere from 12 to 36 hours after the blood was drawn. If a patient is not infected with the virus, that can be a life-threatening delay.

I remember one patient who presented with symptoms of Ebola—fever, diarrhea, and vomiting. She was in our unit 36 hours before we received confirmation that she was not infected with the virus. We were then able to determine that she was actually suffering from diabetic ketoacidosis. Her treatment had been delayed for a day and a half because of inadequate laboratory support. Amazingly, she survived, but she was in a coma for three weeks. That didn't have to happen.

These laboratory delays can have an even greater—and deadlier—consequence. The longer it takes to confirm a positive result, the longer an Ebola-infected patient is left in the "suspected" side of the isolation unit. Every precaution is taken to protect people in that part of the facility from cross-contamination, but there is always the potential that those without the disease can become infected if they are in close proximity to an Ebola-positive person.

As you have heard today, I am a strong advocate for sending large numbers of medical personnel and supplies to increase capacity for Ebola treatment. I also believe we must do more to support the Centers for Disease Control and the National Institutes of Health as they research vaccines and drugs that can give patients hope for recovery. I am deeply grateful to the personnel at Mapp Biopharmaceuticals who even before this outbreak had devoted their lives to combatting Ebola. I hope that the devastating impact of the current epidemic will result in new discoveries for treatments and vaccines in the future, but we cannot wait for a magic bullet to halt the spread of Ebola in West Africa. The current

epidemic is beyond anything we have ever seen, and it is time to think outside of the box.

Historically, Ebola outbreaks have been contained through the identification and isolation of suspected cases, and this has worked extremely well to stop the disease. Today, however, the number of cases and rate of transmission are surpassing the ability of these traditional interventions to bring the situation under control. Intensive medical care is important, but it is given only to patients in isolation units. We know that the virus is being spread primarily by those who are unwilling or unable to go to an Ebola Treatment Unit.

Many Ebola-positive people are staying at home and even hiding when they become ill. Because of fear and superstition, their family members either abandon them or lovingly tend to them in ways that almost always result in the infection of the caregivers. We have to consider the role of home care as we seek to stop the transmission of Ebola.

Caregivers must be trained in safety measures and supplied with basic protective equipment—gloves and masks at a minimum—so that they can care for their loved ones while protecting themselves. As the number of survivors increases, these individuals should be mobilized to help educate and support their own communities. They would be a powerful witness that this disease is not 100% fatal and provide much-needed support to those who are trying to do what is best for their loved ones.

Survivors are sometimes unable to return home because of stigma in their communities, but the great majority of them are looking for ways to be useful to society again. They can be given important roles in educating home caregivers and disseminate the facts about Ebola with their communities.

These are just normal people. Yes, sometimes they are doctors and nurses, but they are also uneducated day laborers and children. Mothers and other respected members of society can play an especially critical role. They have to be trained and given resources.

To effectively execute this strategy, a technical and logistical infrastructure would have to be put in place. The U.S. should provide advisors and experts to train survivors and others and support the delivery of supplies to affected areas. We must also ensure the personal safety of these outreach workers so that they can do this potentially life-saving job confidently. That may require security forces to protect them. I am not suggesting that we have troops staring people down with guns. They have seen too much of that in their recent history. We just need to make sure that these community workers are safe.

Admittedly, homecare is less ideal than the treatment provided in an isolation unit. It would be impossible to administer I.V. fluids and provide other supportive medical interventions. However, there are not enough beds in the Ebola Treatment Units, and many infected people are choosing to suffer and die at home anyway. The least we can do is to try to give their caregivers the information and resources to protect themselves from this deadly virus.

The World Health Organization has laid out a roadmap similar to what I have just described, but they are so bound up by bureaucracy that they have been painfully slow and ineffective in this response. Their recommendations for home

care were made August 28, and I am not aware of any significant progress in the implementation of their plan to date. It is imperative that the U.S. take the lead instead of relying on other agencies.

The U.S. military is highly trained with a clear chain of command. They are experienced in responding to complex international crises such as what we are facing now. I believe they are the only force capable of mounting an immediate, large-scale offensive to defeat this virus before it lays waste to all of West Africa.

All of the interventions needed to stop this horrendous transnational outbreak also require significant funding, and budgets must be adjusted appropriately. This is not simply a matter of providing humanitarian aid, it is very much a national security concern.

One of my patients in Liberia was a man named Francis. Initially, the lab told us that he was positive for Ebola, but the written report we received said "Negative." Everything about his clinical case said that he was infected, so we made plans to retest him. We then received word that there was a typo on the first report and that his test was indeed positive.

Like most patients at first, he was fearful, but he eventually shared the story of how he contracted the disease. "Doc, I remember who the man was," he said. "His condition worsened in his home, and his wife made the decision to take him to the hospital. Everyone around them fled, so I helped his wife carry him to the taxi." On his way to the hospital that man died. Had someone come alongside Francis with training and some basic personal protective equipment, his family might still have their husband, father, and son, and the world might still have this Good Samaritan.

Many have used the analogy of a fire burning out of control to describe this unprecedented Ebola outbreak. Indeed it is a fire—a fire straight from the pit of hell. We cannot fool ourselves into thinking that the vast moat of the Atlantic Ocean will keep the flames away from our shores. Instead, we must mobilize the resources needed to keep entire nations from being reduced to ashes.