Testimony by Dr. E Anne Peterson, MD, MPH
On behalf of World Vision

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The Ebola Epidemic: The Keys To Success For The International Response
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Chairman Coons, Ranking Member Flake and Subcommittee Members, thank you for conducting this hearing on what remains a critical issue to Americans and to the people of West Africa. Thank you also for the honor of being able to speak with you about Ebola. I have spoken before this committee previously when I was Assistant Administrator for Global Health at USAID, but now hopefully will bring a civil society and on the ground perspective on what is and could be done to address Ebola in the affected countries.

Recently, I spent most of a month first in Liberia and then in Sierra Leone as a consultant to World Vision. My terms of reference for that consultancy were very similar to the questions to be discussed in this hearing. I was to assess what was being done, what could be done better and what additional capacity was needed to meet the gaps. The focus of the assessment was on what the faith sector was contributing to the response. My broad terms of reference connected me with a variety of government agencies (US Ambassador in Liberia, CDC, USAID, DFID, and both national Ministry of Heath representatives) as well as a myriad of NGO, FBOs and individual faith leaders. We were able to see an incredible amount of what was happening in response to Ebola could spend time with people in communities in both the countries we visited. This gave us a big picture view of the response but also gave us access to the community perspective that highlighted strengths, weaknesses, gaps and growing needs that had not been addressed yet.

I would like to focus my testimony on three areas of current work that I believe could be enhanced, three "game changers" and then some suggestions about how future USG investments might be prioritized to speed ending the Ebola crisis, mitigate the suffering of the countries most impacted and help rebuild the health system so that Ebola or other similar crises never take hold again at this level. Let me say first and strongly, that the emphasis on stopping Ebola is the correct focus and there is a great effort to achieve that end, but there is room to work smarter and to greater effect. The international aid community is fully aware of the need for coordination, correct messaging and need to build health care capacity but the workload and vertical pillar approach have limited the perspective and effectiveness in each of these areas. With some new perspectives the current work could be significantly more effective. Some of these needed changes were beginning to happen as I left Africa but clarity and encouragement to continue those improvements will maximize impact and the usefulness of the US investments in Ebola. The three game changers would be 1) engagement and mobilization of the faith community, 2) availability of a rapid Ebola test and 3) addressing now the massive indirect impacts of Ebola on the economy, society and health of the impacted countries. Each of these "game changers" would significantly help reduce transmission of Ebola and mitigate the immediate and long term harm of the epidemic, beginning to reestablish a stable, functional system.

Achieving greater impact in our current efforts

There are several ways that the current Ebola epidemic response could be improved to achieve greater impact, both in the immediate and the long term.

First, there is a need for cross-cutting coordination. Coordination of effort is essential and a great deal of time and energy is appropriately being expended on coordination with national government and collaborating aid agencies. While the current coordination is essential the intensity of the response work and the narrow focus of work within each of the coordinating pillars leaves little time for collaborating across pillars, agencies or even learning lessons from nearby affected countries. Opportunities for synergy are lost, unnecessary duplication of effort is inevitable. These are predictably inefficiencies and like vertical programming of the past measureable and laudable progress might be happening in a certain "pillar" of the response, but the disconnected pillars do not build a coherent health system. The gaps between the vertical pillars are no one's responsibility and go unnoticed until they reach harmful levels. The recent Institute of Medicine (IOM) report that I was honored to co-chair with Ambassador John Lange, "Investing in Global Health Systems: Sustaining Gains, Transforming Lives," speaks about the limitation of the piecemeal approach to health and cites this Ebola outbreak as an example of what happens without a strong and intact health system. Our Ebola response is falling into a similar vertical, piecemeal set of actions.

Invest sustainably. The US is investing heavily in the Ebola response and doing good Ebola control response with the invested funds. It is probably necessary, at least for patient care, that there is a parallel Ebola system in addition to the regular health care infrastructure. We do want to separate Ebola patients from other patients to prevent transmission. We are clearing land, putting up tents and manning Ebola units primarily with foreign medical personnel. While this is due in part to an existing lack of health care workforce exacerbated by the epidemic, it is not an approach that will help build national capacity, either in health facilities or workforce. When Ebola has been halted, the tents will be rolled up and removed, the foreign workers will return home. The other preventable health problems that have been ignored and neglected by a health system either shut down or diverted to Ebola will be of far larger proportions than before Ebola emerged. And unless we do our current work differently, the health system which has lost so much manpower will be weaker than before Ebola while forced to address greater and ongoing health challenges. It is possible, to address the urgent Ebola scale up needs in a way that contributes to a stronger and sustainable health system. If we plan and invest only in the short term control of Ebola, we will miss a great opportunity to strengthen national health systems to build their capacity to address the already prevalent preventable maternal and child deaths or to avert or respond to the next major health crisis.

Listen to the communities. There are so many meetings and long conversations among al the Ebola response agencies that it isn't obvious initially that conversations are primarily between foreign aid workers and the government officials and rarely do we hear the voice of community members. Decisions and activities in the Ebola response have in some cases led to distrust and anger in communities, messages on the seriousness of Ebola have been scoffed at as unreal by some and taken fatalistically by others. In many instances, well intentioned scientifically based

messages just haven't elicited the behavioral responses from the communities that were desired and transmission of Ebola therefore continues. The only way to develop effective behavior change programs and messages is to know and address the issues of the community from their perspective, addressing the fears and beliefs that have hindered the response effort. Listening before messaging is the key. Listening to the concerns of community members, the mothers with young children as well as leaders who might be at the decision tables will lead to a better understanding of what is needed to change behaviors and reduce Ebola transmission.

Game Changer: Engaging with the faith community

If most Ebola transmission is happening in communities, as it is, and if we acknowledge it is hard for foreign aid agencies to link directly to communities, then an interface or intervening organization is needed. Far better than secular NGOs, faith-based NGOs or FBOs and church or Muslim associations are deeply embedded and knowledgeable about their communities and can link the voices and views of the communities to the Ebola response.

The US Government has long worked with faith-based organizations. Engaging with FBOs was critical in the war against AIDS and rose to some prominence in the implementation of PEPFAR. Longer ago than PEPFAR, local churches were instrumental in the small pox eradication efforts in the same West African settings now beset by Ebola. Yet, USG engagement with FBOs or mobilization of the faith networks has not been a core part of the Ebola response to date.

A core focus of my work in Liberia and Sierra Leone was to conduct a qualitative assessment for World Vision of the roles of faith-based organizations (FBOs), churches and faith leaders in the Ebola response; what were they doing, what could they be doing and how could they be better integrated with the US government Ebola response. Granted, there are fewer FBOs who work in disaster humanitarian operations type settings, but there are some FBOs experienced, willing or active, such as Samaritan's Purse work in Liberia that responded early and at great cost in establishing Ebola treatment centers. Medical Teams International is providing training in infection control. Catholic Relief Services, CAFOD (another Catholic FBO), Catholic Medical Mission Board, MAP international, IMA World Health and World Vision all are participating in different places and ways.

I'll use World Vision as just one example of what FBOs can contribute to the fight against Ebola. World Vision works primarily in Sierra Leone and has taken on unusual leadership roles in addressing Ebola, such as efforts to improve safe and dignified burials, training pastors and imams on Ebola prevention and stigma reduction, and addressing the indirect consequences of Ebola (including food insecurity, livelihoods, care of orphans and survivors, and educating children while they are out of school).

The first and perhaps most urgent FBO coalition activity was taking on safe and dignified burials. The World Vision coalition in Sierra Leone, with Catholic and Muslims partners, has taken on managing, training and paying burial teams in 12 of the14 districts. They making sure the Ministry of Health burial teams are actually paid for their gruesome work, using their financial management expertise. As result of this effort, there are fewer burial team strikes and great progress has been made towards responding and conducting all burials within 24 hours.

The added value of the FBO rather than secular coalition is that they have added a strong emphasis on how to convert safe but offensive burial practices (mass unmarked graves, no markers, no prayers or family attendance) into safe but dignified burials acceptable to the communities. As burials become “dignified” and faithful to spiritual traditions, families will no longer need to conduct the high risk transmission secret burials of Ebola deaths that are occurring now.

But the issue isn’t just what are international FBOs doing but what are the faith leaders and local churches doing and what part could they play in the Ebola response in their communities. In Liberia, there was more vigorous infection control but less visible coordination among the faith community. The reverse was true in Sierra Leone, where infection control practices were more lax but there was more action and greater coordination among the local faith community.

The church, as has been true in past epidemics like AIDS, has been mixed in their response. There are many examples of churches being helpful and others that spread messages and practices contrary to helping control the spread of infection and discourage stigma. The situation is improving over time as the stark reality of Ebola hits congregations directly. Most churches have stopped the practice of greeting one another with handshakes or kisses or “laying on of hands” in prayer for the sick. Many, but not all, churches and mosques now have chlorine and hand-washing stations set up before people enter the church though sometimes the chlorine is missing and the water bucket is dry. A brave few churches were venturing out from their church buildings to conduct services right outside the doors of Ebola treatment units so patients can hear that others are praying for them. Others are beginning to note and address the needs of widows and orphans, or provide trauma counseling for devastated families. Support and reassurance from faith leaders is essential also in helping the transition to safe and dignified burials be acceptable to their communities. If faith leaders are engaged and informed they can even pave the way for acceptance of new tools, like an Ebola vaccine or rapid diagnostic test once they are available,

The faith community has a clear command to meet the needs of their people, but as the epidemic has spread, the desire for reliable information has grown but many churches and mosques do not have reliable ways to learn about Ebola to correctly guide their congregations. Some have welcomed scientists from the CDC to their services to learn about Ebola. In addition to information from the government and CDC, there is a need to frame the science of Ebola response into the more familiar faith language of the Christians and Muslims. World Vision is leading another consortium, working with CRS and the Muslim organization Focus 1000, on the production of a toolkit on Ebola messaging to be disseminated through the leaders of each faith group. World Vision is combining the available scientific information on Ebola with the faith oriented tool kit into a reflective and action oriented training for a wide array of faith leaders, Muslim and Christian, through its Channels of Hope program which had previously been developed and used for training in HIV/AIDS.

Through this tool, faith leaders can reduce negative messages and enhance positive ones, such as that reporting in to Ebola centers as soon as the disease is suspected protects their families from harm. Rather than preaching fear, faith leaders can affirm that God works through His people to meet the needs of the sick, widows and orphans. Framing the stigma being experienced by families of victims and survivors in parallel to biblical example of reaching out and caring for

lepers and outcasts can be particularly helpful in reducing stigma faced by survivors. Correct information, in the hands of faith leaders, harmonized and expressed in their faith language, can overcome widespread mistrust of the government and by extension the Ebola response. FBOs and faith leaders can encourage the people of Liberia, Sierra Leone and Guinea not only to respond more appropriately to Ebola but to be active agents to stop the spread of Ebola and mitigate the enormous personal, spiritual and societal impacts of Ebola on their people.

But the impact of Ebola and the opportunities for faith leaders and FBOs to mitigate the impact of Ebola goes far beyond stopping Ebola infections. Food insecurity is increasing as prices rise and farmers are not planting crops. Attention is also diverted from other health issues. Most deaths in Ebola affected countries are not Ebola deaths. The even larger epidemic of deaths is from pneumonia, childbirth, malaria and diarrhea due to the Ebola epidemic's impact on the health care system, lack of preventive services and broken societal and economic structures. Addressing these issues cannot wait for the end of the Ebola outbreak and the global health community, FBOs and faith leaders know how to prevent these deaths. It is the kind of work they are already called to do. They just need encouragement and resources to take on the daunting devastation of the impact of Ebola on these countries.

Game Changer: Rapid Diagnostic Test for Ebola

Ebola symptoms are similar initially to many other diseases. This non-specificity of symptoms has profound impacts on health care worker risk and on patient care seeking behavior. I would argue that not being able to know promptly whether a patient (or body) has Ebola or not is a major driver of continued Ebola transmission and the cause of the collapse of almost all other health services, leading to unmeasured numbers of non-Ebola deaths indirectly caused by Ebola. A rapid diagnostic test would have a dramatic impact on both health care workers and patients

Most of the recent health care worker infections have not occurred in Ebola treatment centers but in settings where they thought they were treating illnesses other than Ebola. A doctor was infected and died after delivering a baby. Forty-two health workers were infected by one Ebola patient, a friend who claimed initially only to have an ulcer. Twenty one of those health workers died. Each time a health care worker in a non-Ebola center is infected and diagnosed as an Ebola patient, all his or her health care worker colleagues become contacts, must be quarantined and often the care center closes until the 21 day quarantine is completed. Perhaps as much as two thirds of the regular health system is closed and once closed, it is very hard for health care workers to return to take on again the risks of caring for patients who are not supposed to have Ebola but might.

Patients, just like doctors, can't tell the initial Ebola symptoms apart from many other common diseases. Unless they have had significant exposure to a sick or dead Ebola patient, most of the symptoms will be due to malaria, diarrhea, typhoid fever, lassa fever or the number one child killer, pneumonia. These very common illnesses, have only become more common as the immunization programs, malaria prevention programs, outpatient treatment centers have closed in mass. Mothers, in poor slum areas have stated emphatically, that if they or their child was sick with a fever or a stomach ache or diarrhea they would not bring them in to a treatment center. They know these symptoms could be Ebola, but they believe sometimes rightly and sometimes

with wishful thinking, that it is far more likely to not be Ebola than to be Ebola. They don't want to risk "disappearing into an Ebola" center never to return. When someone becomes sick they are rightly afraid to come in for care. If there symptoms could at all be like Ebola, as is true of many common illnesses, they know they will be held in Ebola observation until the test result is known 2-3 or more days later. They also know that staying in these holding centers with suspected Ebola cases puts them at high risk of being infected with Ebola while seeking care for another health problem. Very logically they stay home until it is clear they have Ebola. They would rather risk their child dying at home of malaria than risk getting Ebola and dying far away.

But if in fact, the sick person has Ebola the delay in accessing care has impact on more than just that one individual. We have learned in this epidemic that Ebola is both more infectious as the disease progresses and that infectivity is dose dependent. The sicker and longer an Ebola patient stays in the home the greater the likelihood of transmission to family and friends.

But if we had a rapid Ebola test at the triage of all non-Ebola centers and maybe even available for community health workers, all of these scenarios are changed. Health care workers could safely go back to work and families could safely bring their sick family members in for diagnosis and treatment. Communities, families and patients would know only non-Ebola patients would be in the regular health centers and Ebola patients would be referred to now much less crowded Ebola centers. This would decrease transmission of Ebola in communities because families would be less likely to delay. It would decrease transmission within holding and quarantine centers. Patients could safely seek treatment for malaria and the increasing common diseases caused directly by the diversion of care to Ebola and halting of preventive and curative services other than Ebola. It would even reduce transmission in Ebola centers where uninfected suspect cases were previously being exposed to Ebola. Health care workers, both national and international volunteers, who are not ready to treat Ebola but do want to assist with the devastating health needs in the impacted countries could safely return to work. We could begin to rebuild the broken health system that allow the Ebola rampage to begin and continue unchecked.

Community Ebola burials have been a source of anger and sometimes violence, especially if it turns out the death was not an Ebola death. A rapid test would contribute rebuilding of relationships with the community and to decreasing transmission since only the fewer and proven Ebola burials would need Ebola burials. If secret burials were thereby avoided, we would begin to get more accurate death reporting, surveillance and referral. It would also help ensure when there is a non Ebola death that homes and possessions aren't destroyed unnecessarily. A rapid diagnostic test would facilitate more rapid access to care for family contacts, less breaking of quarantine and fewer contacts lost to follow-up. All of these impacts will lead to better data on deaths, reduced burial transmission and better relationships with community members, which directly or indirectly enhances Ebola infection control.

Game Changer: Address the Indirect Impacts of Ebola

The massive indirect impacts of Ebola on the economy, education, social structures and health of the impacted countries are much greater and long lasting than the impact of the Ebola epidemic itself. The plight of children demonstrates just a portion of this impact. WHO estimate of the

number of orphans from Oct 29th for the 3 countries was 10,395 single orphans and 4,455 double orphans. These numbers corrected for underreporting (CDC uses 2.5 fold multiplier, which has been verified in an active surveillance activity in November) would make the estimated total orphans 25,986. Because of the previous civil war, there were many single parented homes in both Liberia and Sierra Leone. When Ebola hits these vulnerable homes, with perhaps greater adult vulnerability to Ebola than children, there are a disproportionate number of double orphans which is unprecedented even in Africa. In Sierra Leone, 42% of the orphans are double orphans and in some districts there were more double orphans (both parents dead) than single orphans. This was unheard of even in the height of the AIDS epidemic.

Life is difficult in Sierra Leone and Liberia, even before Ebola. There are high child and maternal mortality rates and poverty in both countries, which was just beginning to improve after the civil war of a decade ago. Now, ALL children are impacted by Ebola. Most are out of school for the entire year, with some radio broadcast classes as their only educational input. About 50% of parents have been keeping their children home - all the time - no friends no family gatherings so they aren't exposed to Ebola. Most of the regular health care facilities are closed for any usual illnesses - malaria, diarrhea, pneumonia. Children (all children but even more so for orphans) are less well-nourished because of increasing poverty and food insecurity, they are also no longer receiving preventive services like Vitamin A or routine vaccinations. Therefore disease rates are escalating just as access to all health services, except Ebola services, are decreasing.

Stigma is a debilitating reality for children, adult survivors and families of Ebola victims even if they never had Ebola. People are afraid of the children as potential vectors of Ebola but also don't trust that the children won't bring Ebola into their home, even after a 21 day quarantine. Unlike other orphan situations in Africa, the extended family is very reluctant to take the children in. Even those who would, usually can't afford to take in extra children. The economy is so hard hit with so many businesses and schools closed that there is little income. Families in poor urban areas have gone from 2 meals a day to one meal a day for their own children and just can't feed anymore. In rural areas, between stigma and lack of crops, orphaned children are abandoned in large numbers. People are also afraid of survivors, especially since even when a survivor is no longer infectious they often have continued symptoms of migratory joint and muscle pain – which people misinterpret as still sick with Ebola. Survivors often move across the country to avoid anyone knowing they were sick with Ebola even if they are fully recovered.

Often survivors also have no home to return to or family members have no home to stay in. When a sick person or body is picked up the house must be decontaminated, this may destroy much of the household belongings and the house itself is stigmatized as an Ebola house. It may in fact be infectious for a few days so care and decontamination is needed. But the process leads to further impoverishment and stigmatizing of those who have just been through the horrific experience of being sick with Ebola.

The indirect impacts of Ebola need immediate and long term response. Without food and financial support food insecurity now, is likely to evolve into something closer to famine in a few months. WFP, UNICEF and some NGOs, like World Vision, are beginning to partner with faith leaders and communities to identify hard hit communities, orphans and other vulnerable children (OVC) and survivors to begin to provide child protection, food and safe places to live.

These devastating impacts of Ebola warrant attention in their own right. These are illnesses and deaths we know well how to prevent. But ignoring them also impacts Ebola prevention efforts. Sick and malnourished children maybe more vulnerable to Ebola but certainly will add to the case load of an already overburdened health system. Every malaria case prevented is one less diagnostic dilemma that complicates isolation of suspected Ebola patients. When hunger, illness or economic necessity compel someone to break quarantine more Ebola transmission is possible. When these other concerns loom so large and compromise life and health, Ebola precautions fall in relative importance and increased transmission becomes more likely. We cannot wait until the end of the Ebola outbreak massive indirect impacts of Ebola on West African society. Again, in Sierra Leone World Vision is ahead of the game in commissioning a rapid assessment of these indirect impacts of Ebola. They will use the information to help them reprogram their own funds but I believe this information will also provide desperately needed data for advocacy and prioritization of the global efforts.

What could/should the USG do?

- Stop Ebola by enlisting the assistance of those who care even more than we do- the people of Liberia, Sierra Leone and Guinea. Work with trusted faith leaders to empower communities: listening to their concerns and potential solutions.
- Rebuild better not separate and temporary. The incredibly weak heath system, lack of surveillance systems, labs, inadequate workforce are the things that allowed the Ebola outbreak to reach such epic proportions. Instead of building a parallel system, in tents and manned by foreign health care workers, we should be "building back better" in ways that last; upgrading permanent facilities, building communications systems, training all cadres of health workers in infection control and disease treatment with a strong emphasis on preventive medicine, public health and community-based interventions and disease prevention. It would have been far easier to identify the first cases of Ebola if they were not lost among the many sick from diseases we know how to prevent.
- Don't wait. The indirect impacts of Ebola on the people of each of these countries are enormous. As poverty, malnutrition, lack of school and work and preventable diseases increase, Ebola control will fall lower on the population's priority list. If you can't feed your child, the "far away" risk of getting Ebola becomes much less important.
- Listen well, address their fears, give messages of hope, celebrate survivors, and empower parents, families and communities to protect themselves and assist in the response.
- Message at home. Stopping Ebola in Africa is the best protection for Americans and celebrate those willing to serve in Africa. Healthy people don't transmit Ebola. Health care workers are not a danger to Americans just because they have worked in West Africa. We need to encourage American volunteers who want to help to be able to go and to be able to return home without stigma, shunning and exclusion from normal American work and society. The inappropriate level of fear is hindering the flow of aid workers needed to stop this Ebola epidemic there and increasing the risk of spread here.

Conclusion

I am very proud of my country for its extraordinary efforts to address Ebola. The investments by the US to address the Ebola outbreak in West Africa are critical and are the best way to protect the American people. We have learned an immense amount in this current epidemic, that we

couldn’t have learned from previous smaller outbreaks. But we must continue to learn and to apply the lessons learned, to improving our medical and the non-medical programs, addressing the urgent demands of stemming the spread of Ebola and addressing the urgent life needs of communities devastated by the presence of Ebola in their country We are doing well but we can do even better by investing in the right interventions, focusing on long-term sustainability and engaging the right stakeholders. We can stop the Ebola epidemic and leave behind a health system and developed infrastructure well-positioned to respond to future crises.