Statement of Mr. Rabih Torbay
Senior Vice President for International Operations
On Behalf of
International Medical Corps
Before the
House Committee on Oversight and Government Reform
The Ebola Crisis: Coordination of a Multi-Agency Response

October 24, 2014

Chairman Issa, Ranking Member Cummings, and distinguished members of the Committee. On behalf of International Medical Corps, one of only a small handful of international NGOs in the world to be treating Ebola patients, I would like to thank you for inviting me to testify today and for your leadership in convening this critically important hearing. We would also like to express our appreciation to the U.S. government for their pivotal action and generous support for the response.

International Medical Corps is a global, humanitarian, nonprofit organization dedicated to saving lives and relieving suffering through health care training and relief and development programs. Its mission is to improve the quality of life through health interventions and related activities that build local capacity in underserved communities worldwide. By offering training and health care to local populations and medical assistance to people at highest risk, and with the flexibility to respond rapidly to emergency situations, International Medical Corps rehabilitates devastated health care systems and helps bring them back to self-reliance.

My remarks today will largely be confined to our operations in Liberia and Sierra Leone—where the overwhelming majority of Ebola cases have been reported.

The Outbreak and Our Response

Our response to the Ebola outbreak has been robust. By the end of November, I anticipate we will have a total staff of about 800 in Liberia and Sierra Leone. Approximately 70 of these will be expatriates.

I would like to take you through the response of my organization to the Ebola outbreak. International Medical Corps has operated health care and humanitarian assistance programs in West Africa since 1999.

When the first Ebola cases were detected in the region in late 2013, we were operational in Sierra Leone, providing community level health care, mental health care, and support in the fight against malnutrition. Because of our longstanding work and familiarity with the West Africa region, we learned of the Ebola outbreak almost immediately, at the end of December 2013, and we continued to monitor the pace of the disease.

In March 2014, Liberia's Ministry of Health and Social Welfare provided details on suspected and confirmed cases of the Ebola Virus Disease (EVD) to the World Health Organization (WHO). Two months later (May 2014), the first case of Ebola was reported in the Kailahun District of Sierra Leone, about 270 miles east of the capital, Freetown.

Between mid-June and mid-July, the number of confirmed cases of Ebola in Sierra Leone spiked from fewer than 20 per week to more than 50. During the second half of July, the number of confirmed cases reported in Liberia also increased. After immediate discussions in the field and with partner agencies at headquarters to assess needs and gaps, we realized the epidemic had reached out of control levels.

By this time, we had already deployed teams to Sierra Leone to work with local NGOs as part of a community-level campaign to raise awareness about Ebola. On July 31st, Sierra Leone President Ernest Bai Koroma declared a state of emergency. The following day, we ordered a rapid assessment of the local conditions and triggered our highest category of emergency response. We also determined the more urgent task was treatment of those who had contracted the virus. Our Emergency Response Team arrived in Sierra Leone on August 9th. Since then, we have begun construction on—and will staff—a 50-bed Ebola Treatment Unit (ETU) in the town of Lunsar, a commercial hub with a population of more than 35,000, about 60 miles northeast of Freetown. The projected date of completion of this unit is November 7th and we anticipate receiving our first patient by November 15th. We plan to operate a transportation service for the ETU that will include minibuses, ambulances and hearses.

We also expect to manage a second 50-bed ETU in Makeni, a city of over 100,000 about 110 miles northeast of the capital. The locations of these two treatment units were chosen because they are in areas with the highest concentration of new cases in Sierra Leone in addition to the country's capital. Throughout this process, we have coordinated closely with the Sierra Leone Ministry of Health and Sanitation, with donors, including USAID, Britain's Department for International Development, the European Commission's Humanitarian Aid and Civil Protection department (ECHO), Irish Aid, WHO, the CDC and other International NGOs.

In Liberia, we trigged our highest category of emergency response and need for a rapid assessment of conditions on August 2, 2014. Five days later (on August 7th), Liberian President Ellen Johnson declared a

state of national emergency in the country. Our Emergency Response Team arrived in Monrovia 72 hours later to begin its assessment. What our team found on the ground in Liberia confirmed that urgent action was required. In a few short months, fallout from the Ebola outbreak had brought the country's already fragile health care system to the brink of collapse. Many were dying. Most were afraid. Previously busy hospitals and clinics were empty, with both staff and potential patients too frightened to go there for fear of being infected with the virus. Rather risk infection, mothers shunned life-saving vaccinations for their children, and if their child became ill—even seriously ill—all too many believed the safer option was to not seek treatment at all.

For us, coordination in emergency response is critical. In these critical circumstances, we reached out to key actors, such as WHO, the CDC and USAID even before the deployment of our team. We were also in regular communication with Médecins Sans Frontières (MSF) in Brussels. Once on the ground in Liberia, we immediately began coordinating our work with other groups involved in the response of the Ebola crisis, particularly Liberia's Ministry of Health and Social Welfare, as well as the representatives of USAID's Disaster Assistance Response Team (DART), WHO, the CDC and MSF. As part of an Incident Management System established to tackle the Ebola outbreak, International Medical Corps quickly agreed to manage and provide the necessary staff for an ETU being built by Save the Children in the Suakoko District of Bong County, about a four-hour drive north of the capital, Monrovia. MSF graciously offered training for our key staff who would be operating the ETU. The Ministry of Health provided us with a cadre of national health workers that would staff the ETU, and the management of Cuttington University provided us with their dormitories to house our staff, as well as other administrative buildings. We are thankful to all for their support.

We admitted our first patients to the Bong county ETU on September 15th. Currently, we have 53 beds occupied and staffed by a team of 17 expatriates and 161 Liberian nationals. We are gradually building up to 70 beds and a staff of around 230. I would like to take a moment to acknowledge the dedicated and courageous staff working in our treatment center. They have come from inside Liberia and outside – including physicians and nurses from many parts of the United States, Europe and Africa. Our staff is comprised of doctors, nurses, technicians, specialists in water, sanitation and hygiene, logisticians, mental health professionals, custodial workers, and members of burial teams.

To date, this ETU remains one of just two in Liberia operating outside of Monrovia. Our operations there involve isolating and treating patients, providing them with counseling, caring for the remains of those who succumb to the disease, operating ambulance service dedicated to transporting suspected Ebola patients to the ETU and returning those home who have either been cured or tested negatively for the virus, assisting in the reintegration of those returnees to communities that may be anxious about their return, and working with local NGOs on patient referrals.

After discussions with the Ministry of Health, WHO, the CDC, DART and the U.S. military, the U.S. Navy established a laboratory at Cuttington University, adjacent to our ETU. The presence of this laboratory and its ability to turn around the results of blood test for Ebola quickly has made a major difference to our work. It has also saved many lives by allowing those who test negative for the disease to leave the ETU far sooner than they did previously—from as long as five days to a matter of 5-7 hours. I want to take this opportunity to express my personal thanks to the U.S. military for establishing the laboratory in Bong.

In both Liberia and Sierra Leone, we are preparing to manage a second Ebola Treatment Unit—a 70-bed unit in Margibi County, Liberia and a 50-bed unit in Makeni, Sierra Leone. Approximately within the next three weeks, with funding from USAID, we expect to open a training center in Bong County to pass on the knowledge we have gained to members of other NGOs who want to join in the effort to stem the current outbreak. In this center, which will be on the grounds of Liberia's Cuttington University, adjacent to our ETU, we will offer a fast-paced 7-12 day training course for those arriving on the frontlines of the fight against this disease.

Physicians and nurses coming into direct contact with Ebola patients will receive up to 12 days training, while other essential skilled technical staff, such as logisticians and water and sanitation engineers, will receive 7-10 days. Among the individuals we plan to train are members of a U.S. Public Health Service team that will staff a 25-bed Ebola Treatment Unit in Monrovia dedicated to treating health workers who have been infected with the disease during the course of their work treating others. A similar training center will be established in Sierra Leone as well.

Such hands-on training is the key to protecting health workers who must operate in an environment where all know the Ebola virus is present. Strong guidelines and regulations are important, but they must be combined with hands-on training to be truly effective.

Procedures, Protocols and Practice

In its 30 years of providing humanitarian assistance to those in need, International Medical Corps has worked in more than 70 countries in some of the world's toughest, most dangerous environments, but had not previously encountered the Ebola virus or treated patients infected with it. However, our experience of working consistently in challenging, high-risk conditions taught us to move carefully, expect the unexpected and to err on the side of caution when weighing risk as we prepared to open our first treatment center. We consulted with staff from Médecins Sans Frontières to draw on the depth of their experience and the guidelines and protocols they had developed in treating Ebola patients during previous outbreaks in Africa. We also reviewed guidelines and protocols from the CDC and WHO.

We learned quickly that treating Ebola patients is a labor-intensive endeavor that demands very strong logistics to maintain the flow of large quantities of supplies, including personal protective equipment (PPE) for the staff, bedding and medications for patients, as well as disinfectant and water to keep the treatment

unit safe and clean. For example, most PPEs can be used only once, then are incinerated to prevent possible infection. We require approximately 840 PPEs per week to comply with the established guidelines to ensure the safety of our staff. We follow a ratio using 3 expatriate doctors per 50 patients, 8 expatriate nurses per 50 patients, 4 local physician assistants per 50 patients, 24 local nurses per 50 patients, and 2 consumable PPEs per patient.

To treat Ebola patients effectively, we require a staff of about 230 to operate a 70-bed treatment unit. This is a staff per patient ratio of over 3:1. At our Bong County, Liberia treatment unit, we currently have a staff of 178 serving 53 beds. Ebola treatment requires higher than normal staff levels to reduce the risk of mistakes that could potentially endanger both patients and staff. One common practice in our ETUs is for members of our teams to work in pairs—what we call a "buddy system." For example, two physicians or two nurses make every decision that in a regular setting would be made by one on their own. Each "buddy" is constantly checking the personal protective equipment of the other and that the delivery of care is running correctly. The "buddy system" is also used when removing a PPE, a procedure that can carry a high risk of infection if not done properly. To further diminish risk, we have also added one more Shift Supervisor, whose task is to make sure each "buddy team" is following the prescribed protocols and to monitor the overall movement of the team and the treatment it is delivering to our patients. Our staff follow very specific and meticulous, step-by-step donning and doffing protocols.

These protocols are demanding and arduous, requiring personal discipline, concentration and patience on the part of all involved to follow. They are needed because the danger to staff can be very high. We are painfully aware that as of middle of this month, more than 400 health workers had been infected with Ebola in the course of their work. In fact, Ebola has been nicknamed "the nurse killer" in Liberia.

I am pleased to report the strict guidelines and protocols we have implemented have been successful. We have been able to both protect and treat health workers at the Bong facility. Actually, one of the patients we admitted, treated and cured was a Liberian nurse infected while caring for Ebola patients at another facility.

Our protocols require that PPEs worn by our staff cover the entire body. No skin can show. We quickly learned that wearing a bulk, impermeable PPE with as many as three layers of protection in West Africa's high humidity with temperatures of 95 degrees means that staff can only work relatively short periods of time—usually between 1 and 2 hours maximum—inside the unit's restricted area before being rotated and replaced by another team.

In addition to the ETUs, a new approach is to be implemented in Liberia and Sierra Leone that is hoped to help contain the virus. Community Care Centers are to be established where suspected Ebola patients could be removed from their homes and relocated into a center in the community where they could be isolated and provided with palliative care. These would be centers with approximately 10 beds where patients could await testing. A patient testing positive for Ebola could be transferred to an ETU for treatment while those who test negative would be allowed to return home. An advantage of such centers

would be to protect families attempting to care for a loved one from being exposed to the virus. We would support this concept as long as the health workers serving in such centers receive both full training and are equipped with the same PPEs as those used in ETUs. The centers should also need to be linked to—and supported by—an ETU, acting as de facto satellites to that ETU.

Funding, Needs and Support

We are grateful for the timely and generous funding we have received from USAID's Office of Foreign Disaster Assistance, which has enabled us to open the ETU in Bong County and to prepare our staff training facility nearby. It has also funded the ETU nearing completion in Lunsar, Sierra Leone. Other government donors have also come forward to address the crisis, as have some private foundations and corporations. However, generating public donations, which are also necessary to support our efforts to fight Ebola, has been a challenge.

As we continue the scale-up in both Liberia and Sierra Leone for what we believe will be a prolonged fight to contain the Ebola virus in West Africa, the needs will grow accordingly. Put simply, we need three things: people, commodities, and money. We need to continue the recruitment and training of staff and to build a "human resource" pipeline. Conditions to facilitate this—which include travel to and from the affected countries, procedures and systems to protect and treat health workers—must be ensured and implemented as soon as possible.

By commodities, I mean everything from PPEs to disinfectant, to vehicles for transportation, mattresses and bed clothing. Many of these items can only be used once to contain the spread of the disease.

The fight to contain Ebola will be costly. Assuming there are 27 ETUs regionally, and 120 Community Care Centers, we anticipate it would require about $1.6 billion for the next 6 months to bring the disease under control. We will also need to consider the secondary impact of the outbreak—the added costs of food, security, and loss of economic activity are estimated at $500 million. Rebuilding the health care system and maintaining an adequate disease surveillance system could run an additional $600 million.

What Works

Mr. Chairman, I would now like to briefly share some of our lessons learned of what we know works. I believe this will help highlight several key areas of focus as we move forward.

First and foremost, we need to contain the disease. For that to happen, we have learned that several factors need to be in place. This includes having operational ETUs that are staffed by well-trained health professionals.

Community Care Centers, if well-staffed and equipped, could help limit the transmission. A robust referral system between the care centers and ETUs, as well as between ETUs to take advantage of available bed capacity in certain areas to alleviate pressure of overloaded ETUs can help reduce the wait, time, transmission rate and mortality rates. Furthermore, a smart and efficient coordination mechanism at the national level is critical for effectiveness of the response. Limiting the spread of the virus in the community is essential to the containment plan. Therefore, a focus on community sensitization, including education, awareness and outreach to build a trusting environment are of utmost important.

Second, building local capacity by carrying out training and supervision of personnel provides countries with the needed tools and mechanisms to be prepared to respond during outbreaks.

And third, we must focus on strengthening coordination of efforts. To turn the tide of this epidemic, we need to work together and use the strengths of all stakeholders involved. For instance, data analysis and sharing information about what is currently happening and where the gaps are is critical.

What is Needed Going Forward

As we have stated above when describing our response, the most critical challenge is the scarcity of health workers to treat patients and staff the treatment centers that are currently in operation and those being built and planned.

We are facing a severe shortage of adequately trained health professionals, both national and international. The difficult work environment, the personal risk, the need for 21 day self-isolation in some circumstances, all make it difficult for us to recruit volunteers. Health care workers also want to be assured that there are clear plans and procedures in place for possible evacuation and treatment should they fall ill. This has been slow in coming. The growing restrictions on travel to and from West Africa will only isolate the affected countries further, compromise the supply chain and inhibit efforts to recruit qualified staff. These factors will further enable the severe outbreak to continue.

Training of health workers and first responders continue to be a major need. This includes training of staff working in a treatment units, at community care centers, burial teams, ambulance attendants, community workers and educators. The training being conducted by the CDC, the training to be conducted by the U.S. military, training being led by other NGOs, as well as International Medical Corps needs to be supported. We, at International Medical Corps, are willing to train ETU staff, both in Sierra Leone and Liberia, to help contain the virus.

I would also like to underscore how vital has been and continues to be the availability of and proper usage of PPEs during the Ebola response. To this end, it is important to note that acquiring appropriate protective equipment has represented another challenge given the numbers required to effectively implement

treatment centers and protect workers, as well as the limited number of available qualified suppliers. The current demand far exceeds the supply. There are currently two main manufacturers for our "acceptable" coveralls (a key component of the PPE), and they are producing at full capacity. We estimate that, at the current stage, they will meet around 35 percent of the demand. Those manufacturers need to be supported and encouraged to increase their production capabilities to meet the demand.

I would like to conclude by offering some recommendations to the Committee for consideration.

First, one of the most critical lessons learned from this response has been the importance of having the human resources ready and prepared to address an outbreak of infectious disease. Cadres of health workers need to be well-trained (and supported) to staff the ETUs and care centers in the affected countries, as well as to prepare other countries in the region for any potential future outbreaks. This epidemic has very visibly demonstrated that it is communities, civil society - including NGOs - and government health workers at the local level who carry out the majority of the response related to treatment, patient care and case management, and community outreach. To be truly effective, it is important that training and supervision of personnel be led by entities with hands-on experience in treatment and management to undertake this task, which should involve actual practical training and not be limited to didactic methods. A comprehensive approach to the training that includes all aspects of addressing the outbreak should include case management and treatment, contact tracing, dead body management, as well as psychosocial support, community outreach and awareness, and social mobilization.

Second, we need to accelerate the construction and staffing of ETUs and community care centers to break the chain of transmission. We must also improve coordination among the centers so that beds are available to patients who need them. Today, some ETUs have many empty beds while others are at full capacity, forcing staff to turn suspected Ebola patients away.

Third, we must improve surveillance and referral systems that will help individuals access treatment quickly and strengthen the link between community-based and referral-systems.

Fourth, we need to establish clear and understandable linkages among various coordination structures that are now in place such as the UN Mission for Ebola Emergency Response and country coordination bodies. Such clarity is especially critical for NGOs who are closest to the ground and doing service delivery, as well as national governments and their agencies. Efficient coordination would also aid in supply chain and logistics issues.

Fifth, while we welcome the advances that have been made over the past few weeks in establishing procedures to evacuate and treat health workers who might contract Ebola, we recommend that the systems

being put in place now be institutionalized and made part of the global preparedness planning in the event of future epidemics.

Sixth, we need to maintain an open airspace to and from the Ebola-affected countries. This is critical for the humanitarian response, to get staff and supplies in and out of the region. It is critical for our recruitment and for the well-being of our staff. We need to contain this virus at the source and we cannot do this without the ability to get much-needed staff and supplies to and from the affected countries. As InterAction, a coalition of over 190 member organizations stated in their recent letter to Congress: "Without the NGO community and its supported health workers on the ground treating patients in West Africa, it will be very difficult to end this crisis."

Seventh, we need to accelerate and support the production of vaccines. The human and economic consequences of this outbreak are disastrous and an investment in vaccines would help mitigate future outbreaks.

Eighth, we need to invest in preparedness in the region at large to ensure these countries have the needed resources, proper training and systems in place to respond to possible future outbreaks. Also, as we have learned over the past few months, the virus does not recognize international borders and could affect other West African Countries with devastating effects.

Finally, in developing and implementing recovery efforts and a long-term strategy, we must focus on building stronger health care systems in the region. Some of the most serious side effects stemming from the Ebola outbreak have occurred within the countries' health care systems. Health centers have closed, emergency and maternity wards are not functioning, hospital staff have stopped coming to work, all of which has had a severe impact on the already dire circumstances facing these countries. As a consequence of the current situation, Sierra Leone and Liberia, which already experienced some of the highest burden of maternal and child deaths, are now facing conditions where there are no available places for women to have C-sections, for children to be immunized, trauma centers to go to after car and other accidents, as well as continue to manage the ongoing severe health problems affecting the countries such as high rates of malaria, pneumonia, and a wide range of chronic conditions. As a result, the mortality rate is expected to increase to higher levels.

Addressing these challenges will require increased financial investments and the engagement of other countries and various stakeholders working in tandem. At the same time, we need to consider the secondary and tertiary impacts of this outbreak such as its impact on economic conditions, livelihoods, food security, and vaccination coverage.

There is no doubt that we will stop this outbreak, end the deaths, and - if done correctly - build the tools to prevent another outbreak of such proportions. We look forward to working with you to make this possible.

Once again, thank you, Mr. Chairman and Ranking Member Cummings for allowing me to present this testimony before your very distinguished committee and for holding this timely hearing. I would be glad to answer any questions the Committee may have.

International Medical Corps

Delivering emergency relief. Empowering long-term recovery through training.

Rabih Torbay is **Senior Vice President for International Operations** and oversees International Medical Corps' global programs in 31 countries on 4 continents and its staff and volunteers numbering over 8,000. Torbay has personally supervised the expansion of International Medical Corps' humanitarian and development programs into some of the world's toughest working environments, including Sierra Leone, Iraq, Darfur, Liberia, Lebanon, Pakistan, Afghanistan, Haiti, Libya and, most recently, Syria.

As the organization's senior representative in Washington DC., he serves as International Medical Corps' liaison with the U.S. government, including USAID, the Department of State, the Department of Defense, and the Department of Health and Human Services.

Raised in Lebanon, Torbay is a civil engineer who worked in that field until early 1999, when he joined International Medical Corps' humanitarian efforts in Sierra Leone. Following the September 11 terrorist attacks, Torbay first went to Pakistan, and then Afghanistan, to lead International Medical Corps' emergency regional response team. He remained in Afghanistan for 8 months establishing programs throughout the country.

In October 2002, Torbay moved to International Medical Corps' headquarters in Los Angeles where he became Vice President of International Operations. In 2003, he led International Medical Corps into Iraq as the first non-governmental organization (NGO) to enter the country, and later one of the first NGOs to enter Baghdad after the war. He remained in Iraq for seven months, setting up a comprehensive relief and development initiative.

Torbay led International Medical Corps' rapid response team in 2004 into the Darfur region of Sudan, where its programs currently address the needs of more than 230,000 displaced persons in some of Darfur's most desolated areas. In July, 2006, after war broke out in Lebanon, Torbay organized International Medical Corps' emergency relief efforts to residents of the southern part of the country, who had been trapped in the fighting there.

After the devastating January 12, 2010 Haiti earthquake, Torbay organized and deployed International Medical Corps' Emergency Response Team that was on the ground in Port-au-Prince providing services in 22 hours. Similarly, Torbay managed and closely supervised International Medical Corps' Emergency Response in Japan after the 2011 earthquake and tsunami, India after the 2013 cyclone and most recently in the Philippines after Typhoon Haiyan. Since 2011, Torbay has been overseeing the crisis in Syria and managing International Medical Corps' relief services for Syrian refugees, Earlier this year he supervised the organization's emergency response in Central African Republic and South Sudan after outbreaks of conflict in both countries. Torbay oversees International Medical Corps' Ebola response in Sierra Leone and Liberia, where International Medical Corps is providing treatment to EVD patients through Ebola Treatment Units. Torbay currently lives in Maryland with his family.

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12400 Wilshire Blvd. · Suite 1500 · Los Angeles, CA 90025 · (310) 826-7800

Committee on Oversight and Government Reform
Witness Disclosure Requirement – "Truth in Testimony"
Required by House Rule XI, Clause 2(g)(5)

Name: RABIH TORBAY

1. Please list any federal grants or contracts (including subgrants or subcontracts) you have received since October 1, 2011. Include the source and amount of each grant or contract.

None

2. Please list any entity you are testifying on behalf of and briefly describe your relationship with these entities.

I am testifying on behalf on International Medical Corps. I am the Senior Vice President of International Operations at International Medical Corps. International Medical Corps is a global, humanitarian, nonprofit organization dedicated to saving lives and relieving suffering through health care training and relief and development programs.

3. Please list any federal grants or contracts (including subgrants or subcontracts) received since October 1, 2010, by the entity(ies) you listed above. Include the source and amount of each grant or contract.

Please see attached list.

I certify that the above information is true and correct.
Signature:

Date: 10/22/2014

International Medical Corps
Federal Awards Received
Note: Agreement sign date was used as the criteria for FY classification

FY 2011

DONOR	Number of Grants	Total
CDC	2	2,839,161
DHHS	1	2,469,955
DOS	1	970,950
OFDA	9	28,887,580
PRM	17	25,164,148
USAID	3	31,583,249
USIP	1	5,535
Grand Total	34	91,920,578

FY 2012

DONOR	Number of Grants	Total
CDC	3	4,723,095
DHHS	1	214,683
DOS	1	50,000
DRL	1	2,399,955
OFDA	18	65,453,563
PRM	11	17,546,558
USAID	3	3,774,587
Grand Total	38	94,162,441

FY 2013

DONOR	Number of Grants	Total
CDC	4	6,709,708
OFDA	14	145,216,020
PRM	19	28,373,723
USAID	6	12,948,451
Grand Total	40	193,247,902

FY 2014

DONOR	Number of Grants	Total
CDC	4	1,784,690
DOS	1	1,979,919
DRL	1	1,499,508
OFDA	8	15,375,359
PRM	17	29,716,441
USAID	6	1,792,825
Grand Total	37	52,148,742

FY 2015

DONOR	Number of Grants	Total
OFDA	6	15,429,703
PRM	10	17,012,144
Grand Total	16	32,441,847