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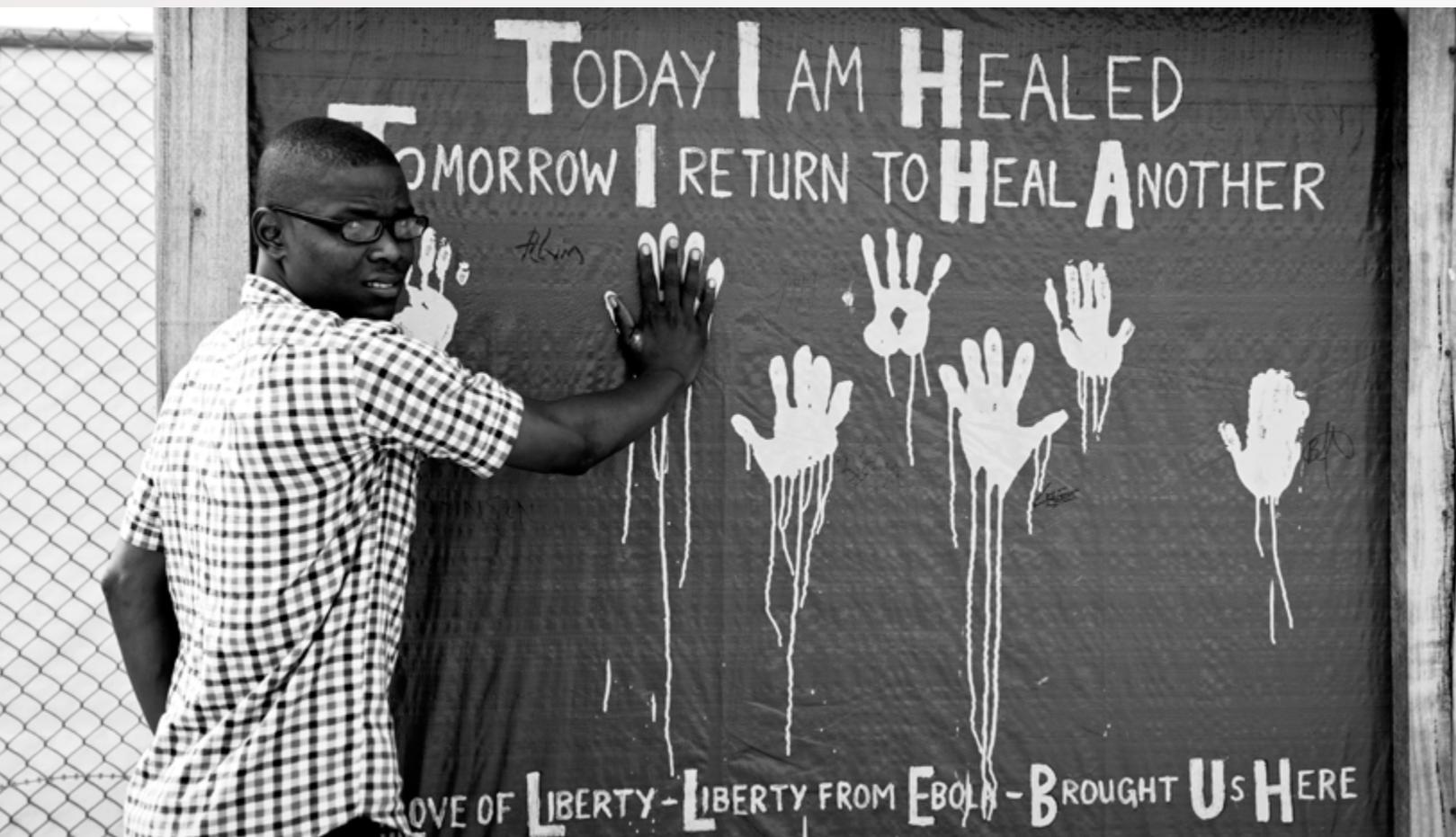


HHS Office of
Inspector General

Lead Inspector General Quarterly Progress Report on U.S. Government Activities

INTERNATIONAL EBOLA RESPONSE AND PREPAREDNESS

September 30, 2015



Lead Inspector General
Quarterly Progress Report
on
U.S. Government
International Ebola Response &
Preparedness

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An Ebola survivor places his hand on a survivor's wall, documenting his recovery from the disease. Since his recovery, he works as a contract tracer, fighting the spread of EVD. (Photo by Neil Brandvold for USAID, Monrovia, Liberia, January 31, 2015)

FOREWORD

As of October 4, 2015, the Ebola virus disease epidemic in West Africa was the largest outbreak of the disease recorded with 28,457 suspected, probable, and confirmed cases that had resulted in the deaths of 11,312 people worldwide. Response efforts, including those on the part of the U.S. Government, contributed to a reduction in the incidence of the disease to the point that no active cases were reported at the end of the reporting period.

Several U.S. Government departments and agencies have been involved in the effort to control the Ebola virus disease outbreak in West Africa, maintain zero cases, address second-order effects, and better prepare international health systems for future outbreaks. U.S. Government agencies have reported approximately \$2.468 billion in obligations toward these international Ebola response, recovery, and preparedness efforts.

The Offices of Inspector General (OIGs) for the Department of Defense (DoD), the U.S. Agency for International Development (USAID), the Department of Health and Human Services (HHS), and Department of State (DOS) continue to work together to ensure independent and comprehensive oversight of related U.S. Government funds, activities, and programs. This coordinated approach helps reduce the risks to taxpayer dollars inherent in complex crisis response and recovery efforts in international settings. The Inspector General community is committed to deterring waste, fraud, and abuse and promoting effective use of U.S. Government resources, and is pleased to be able to exercise this commitment through the implementation of a lead inspector general arrangement for oversight of overseas contingency operations.

This report describes U.S. Government activities related to the international Ebola response, recovery, and preparedness efforts and the oversight of the federal departments and agencies primarily responsible

for this effort. This report meets quarterly reporting requirements to Congress established under Section 8L of the Inspector General (IG) Act of 1978, as amended (5 U.S.C. App.), and covers the period from July 1, 2015, to September 30, 2015.

Jon T. Rymer, Inspector General, DoD

Catherine M. Trujillo, Acting Deputy Inspector General, USAID

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MESSAGE FROM THE LEAD AND ASSOCIATE INSPECTORS GENERAL

We are pleased to provide our third and final report to Congress describing the U.S. Government's response to the Ebola virus disease outbreak in West Africa. This report addresses a range of U.S. Government activities, including those associated with Operation United Assistance (OUA), the DoD mission to help combat Ebola virus disease in West Africa, and features related developments and activities from July 1, 2015, to September 30, 2015.

This report also provides background on the Ebola virus and the progression of the West Africa outbreak during this period as well as its secondary effects on the three countries primarily affected—Guinea, Liberia, and Sierra Leone. It also provides information on the U.S. Government's strategy for addressing the outbreak, as well as related funding, staffing, and activities. In addition, it describes oversight, coordination, and planning work undertaken by the respective OIGs.

The U.S. Government has applied a whole-of-government approach to respond to the Ebola outbreak involving several Federal departments and agencies. These efforts initially focused on controlling the outbreak and now include activities intended to address its second-order effects, build coherent leadership and operations, and strengthen global health security. During the quarter, these activities took place against a backdrop of declining Ebola incidence; a condition that enabled agencies to shift their focus from response to recovery and the longer-term sustainability of health and economic programs.

Pursuant to Section 8L of the IG Act of 1978, as amended, the OIGs for DoD, DOS, and USAID formed a collaborative partnership under the auspices of a lead inspector general designated from among the three OIGs, to provide oversight of designated overseas contingency operations. This arrangement offers a comprehensive and synchronized oversight and reporting framework. As part of its contribution as Associate Inspector General, USAID OIG has assumed primary responsibility for developing this report and its content. However, the report reflects input from all three OIGs mentioned above, as well as from the OIG for HHS, which has been a primary participant in U.S. Government efforts to combat Ebola.

Section 8L authorities and requirements under the IG Act relating to the Ebola virus disease outbreak in West Africa concluded at the end of fiscal year 2015. As a result, this is the last Lead IG quarterly report on

the Ebola outbreak. Notwithstanding this fact, the participating OIGs will continue to provide needed oversight of Ebola-related U.S. Government activities through ongoing and planned audit work and investigative activities in association with their respective mandates.

In leading this interagency effort, we remain dedicated to the principles of high-quality oversight with the goal of promoting efficiency and effectiveness. We are committed to continue to work with our interagency partners to provide independent and comprehensive oversight of U.S. Government work to respond to the Ebola outbreak in West Africa and aid in related preparedness and recovery activities.

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Inspector General
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EXECUTIVE SUMMARY

The Ebola virus disease (EVD) epidemic of 2014-2015 has been the largest outbreak of the disease ever recorded with 28,457 suspected, probable, and confirmed cases worldwide as of October 4, 2015, resulting in the deaths of 11,312 people. The West African countries of Guinea, Liberia, and Sierra Leone have been most severely affected, with 99.9 percent of recorded EVD cases. The last days of the reporting period began the first 2-week period with no new EVD cases in West Africa for more than 22 months.

The path to zero EVD incidence was marked by a decline in reported cases over the quarter. The number of EVD cases and deaths were at their height across the three most heavily affected countries at the start of the reporting period, with 30 and 26, respectively, during the first week of July 2015. The World Health Organization (WHO) declared Liberia EVD-free for the second time on September 3, 2015, while Guinea and Sierra Leone experienced periods without any reported cases before new cases emerged. However, no new cases were reported in any of the three countries in the final days of September 2015.

As the disease has reemerged in the past following periods without any known cases, responders remained vigilant, monitoring those who had high-risk contacts with EVD patients and investigating possible renewed transmission from EVD survivors or animal hosts of the virus.

Enhanced EVD control measures such as contact tracing, surveillance, and safe burial teams, as well as behavior change, community outreach, and social mobilization efforts reportedly contributed to halting EVD transmission in Guinea, Liberia, and Sierra Leone. Despite reductions in the number of new EVD cases during the quarter, responders still faced challenges in monitoring for the emergence of new EVD cases, including community-level resistance to EVD control efforts, concern about unknown and missing individuals who had been in contact with EVD-infected persons, and the movement of those who may have carried the disease to EVD-free areas. Floods in Sierra Leone and outbreaks of preventable diseases like measles presented additional challenges for response teams during the quarter.

Survivors of EVD face potential long-term effects from the disease. The Ebola virus may remain in the body long after patient recovery. Survivors of EVD have reported lingering health problems, including joint pain, headaches, visual problems, extreme fatigue, and mental health difficulties. They also experience stigma associated with the disease, challenges with community reintegration, and diminished livelihoods.

To declare an outbreak over, a country must go for 42 days, or two 21-day quarantine periods, with no new EVD infections.



A young girl stands next to a wall of her house marked by the UN Children's Fund during an Ebola eradication campaign in Tewor district, Liberia. The UN Children's Fund marks the buildings to keep track of households visited. (Photo courtesy of the UN Mission for Ebola Emergency Response, January 28, 2015).

As Guinea, Liberia, and Sierra Leone recover from the EVD outbreak, they also confront serious secondary impacts. Socioeconomic effects have included job losses, market disruption, reduced agricultural production, decreased household purchasing power, and increased food insecurity. The closed borders that were imposed in these countries to help contain the spread of EVD also hampered economic activity by limiting trade and restricting the movement of people, goods, and services. Projected economic growth rates declined by 3.4 to 5.2 percent across the three countries in 2014. The three countries released recovery plans in April 2015 at a combined cost of \$5.2 billion to address the social, economic, and health consequences of the outbreak.

The severity of the EVD outbreak and its potential effects led to a significant response from the international community. The United States has been the largest international contributor to this effort, as U.S. Government commitments to these efforts have exceeded the levels provided by the next nine donors combined. U.S. Government agencies have reported \$2.468 billion in obligations associated with international Ebola response, recovery, and preparedness efforts, and \$1.055 billion in corresponding disbursements. USAID has accounted for the largest share of U.S. Government obligations with 47 percent (\$1.158.8 billion) followed by HHS (\$645.5 million) and DoD (\$631.8 million) with 26 percent each.

During the reporting period, U.S. Government agencies and departments advanced a number of programs and activities to eliminate EVD in West Africa. The U.S. Government supported the construction of emergency operation centers and establishment of emergency management programs to promote the coordination of health and humanitarian response efforts. The U.S. Government supported the continuing operation of Ebola treatment units and community care centers to help isolate and treat suspected, probable, and confirmed EVD patients. Because deceased EVD victims can remain infectious for several days after death, the U.S. Government also provided for the operation of safe burial teams to reduce the spread of EVD.

To support efforts to restore essential health services, the U.S. Government distributed essential medical supplies to healthcare facilities and trained healthcare workers on infection prevention and control techniques. The U.S. Government also provided mobile laboratories and supported laboratory testing facilities in the region to increase diagnostic capacity and enhance EVD surveillance. In addition, the U.S. Government supported communication and community outreach efforts to raise public awareness of Ebola symptoms, modes of transmission, and effective prevention practices.

Controlling the EVD outbreak and maintaining zero EVD cases remained priorities for the U.S. Government, but as the number of new EVD cases decreased, the U.S. Government began to focus on recovery and long-term sustainability of health and economic development programs. During the reporting period, the U.S. Government worked with national authorities in Guinea, Liberia, and Sierra Leone, as well as other international partners, to align transition plans and activities to institutionalize command and control structures needed to respond to EVD and other disease outbreaks, support and promote national and local ownership of EVD response activities, and develop longer-term disease surveillance, health promotion, and national response programs.

The EVD outbreak adversely affected food security in Guinea, Liberia, and Sierra Leone. Efforts to mitigate the EVD outbreak and a general fear of contracting the virus led governments and communities to impose travel restrictions and quarantines. These actions led to market and border closures and restricted trade. Combined with these factors, below-average agricultural production contributed to rising food prices while job losses reduced household incomes. Lingering effects in these areas and other localized issues, such as prolonged lean seasons, produced continued food insecurity in Guinea, Liberia, and Sierra Leone. During the reporting period, USAID implementing partners worked to improve food security conditions among those affected by the outbreak in Guinea, Liberia, and Sierra Leone, primarily by restoring household access to food through targeted cash transfers, food vouchers, and cash-for-work opportunities. USAID also worked to identify opportunities for public-private partnerships to rejuvenate agricultural sectors and livelihoods while working to increase the availability of high-quality, certified seeds in the affected countries.

At the height of the EVD outbreak, national and local healthcare systems in Guinea, Liberia, and Sierra Leone were overwhelmed by the scope and scale of the epidemic. Healthcare facilities lacked sufficient supplies and required more qualified healthcare workers. Many healthcare workers contracted EVD or reportedly refused to work due to safety concerns or pay problems, leaving health facilities unable to care for EVD patients or provide conventional care for health matters unrelated to EVD. Basic medical services such as infant delivery, maternal care, and the treatment of common diseases like malaria were diminished. Moreover, fear of contracting EVD at medical facilities reportedly prompted some individuals to avoid medical attention for common ailments, treatments, and preventative care, including vaccinations. To help improve these conditions, USAID worked to strengthen the management and delivery of non-Ebola healthcare services and address social issues that had

The United States has been the largest international contributor to this effort, as U.S. Government commitments to these efforts have exceeded the levels provided by the next nine donors combined.

presented obstacles to the proper operation and appropriate utilization of the healthcare system.

Governments in Guinea, Liberia, and Sierra Leone struggled to provide traditional public services while responding to the outbreak. Government services such as public education ceased and hubs of economic activity were closed. To address these factors, USAID funded activities to strengthen host governments' ability to deliver services and engender private sector investment in local economies.

Response efforts during the outbreak were hampered by communications and technology weaknesses in Guinea, Liberia, and Sierra Leone. Available systems did not have the capacity to transfer information at the speeds needed for rapid response to outbreak-related developments, leaving healthcare workers dependent on paper reporting, which took many days or weeks to transport. Limitations in the reliability of payment systems resulted in salary interruptions for healthcare workers and delays in response efforts. In response to challenges in these areas, USAID worked to advance the development of communications and data management tools through partnerships with host governments, civil society, and the private sector. USAID provided support to strengthen health information, communication, and digital financial systems in West Africa through technical assistance to ministries of health and partnerships with technology firms. USAID also helped to coordinate government and donor investments in health information systems to improve interoperability.

In addition to working to address the secondary effects of the outbreak in the most heavily affected countries, the U.S. Government took steps to promote EVD preparedness in Africa and strengthen global health security. Federal agencies sought to strengthen prevention, detection, and response capacity by promoting effective health institutions and personnel, building emergency management response capacity, and expanding surveillance and laboratory systems.

At the peak of the outbreak, DoD, DOS, USAID, and HHS components deployed thousands of personnel to support EVD response efforts. Federal agencies reported several difficulties in staffing these efforts, including challenges identifying and recruiting personnel who met response needs, problems associated with language proficiency requirements, high personnel turnover rates, and issues with staff transitions due to short deployments and poor communication. By the end of the reporting period, these agencies reported that a total of 796 personnel remained significantly engaged in Ebola response, recovery, and preparedness efforts.

The multiagency response to the EVD outbreak in West Africa reportedly presented a number of coordination challenges among the departments and agencies involved. According to after action assessments, while each agency generally understood its own role in the initial stages of the response effort, some were unclear about the technical capabilities, roles, and responsibilities of other U.S. Government agencies engaged in response efforts. This reportedly created confusion, as agency representatives had imprecise or incorrect expectations regarding the capabilities, plans, and activities of other participating agencies. Offices did not have established relationships with other key players, the lack of familiarity with the structures and operations of other agencies posed challenges, and roles and responsibilities were not always clearly established. With time, interagency coordination reportedly improved and some commentators expressed optimism that, as a result, the U.S. Government will be in a better position to mount an effective response to future events of this kind.

The DoD, DOS, HHS, Department of Homeland Security, and USAID OIGs, as well as the Government Accountability Office, have oversight roles relating to U.S. Government Ebola response and preparedness programs and operations. By the end of the reporting period, these oversight bodies had issued 4 related reports and work was in progress or planned on 27 other audit or inspection-related oversight activities. During this reporting period, OIGs opened and closed three Ebola response-related investigations. Three other investigations were ongoing at the end of the quarter. In addition, to promote fraud awareness among personnel with a role in response and recovery efforts, USAID and DoD OIG conducted nine fraud awareness briefings for 229 attendees.

Section 8L authorities and requirements under the IG Act relating to the EVD outbreak in West Africa concluded at the end of fiscal year (FY) 2015. As a result, this is the last Lead IG quarterly report on the Ebola outbreak. The participating OIGs will continue to provide needed oversight of Ebola-related U.S. Government activities through ongoing and planned audit work and investigative activities in association with their respective mandates. These efforts help provide assurance that U.S. Government funds dedicated to EVD response, recovery, and preparedness efforts are spent as intended and that related activities are implemented as effectively and efficiently as possible.

THE WEST AFRICA EBOLA OUTBREAK

The 2014-2015 Ebola virus disease (EVD) outbreak in West Africa is the largest recorded EVD epidemic in history with 28,457 suspected, probable, and confirmed cases, and 11,312 deaths worldwide by the end of the reporting period.¹ This epidemic traces its origins to Guinea in December 2013. Thereafter, it spread as an unidentified disease to other parts of the country, reaching the Guinean capital, Conakry, on February 1, 2014.² The Guinean Ministry of Health (MOH) issued an alert about the as-yet-unidentified disease on March 13, 2014. On March 22, 2014, the Institut Pasteur in France confirmed that the disease was caused by the Ebola virus, and WHO publicly announced that Guinea was experiencing an EVD outbreak the following day.³

By April 1, 2014, neighboring Liberia reported two confirmed cases of EVD infection, while Sierra Leone was monitoring two probable cases.⁴ Although newly reported EVD cases in Guinea and Liberia declined in April and May 2014 and international health experts believed the outbreak had ended, the virus continued to spread in the region and Sierra Leone reported its first EVD case on May 24, 2014.⁵ Weak health care systems, delays in diagnosing the disease, and national governments that lacked experience identifying EVD or containing its transmission, all contributed to the spread of the disease in the region.⁶

Guinea, Liberia, and Sierra Leone have been most severely affected by the outbreak, accounting for 99.9 percent of EVD cases.⁷ These countries faced several challenges in addressing the epidemic early on, including resistance to EVD control efforts in communities; the presence of EVD in urban settings; inadequate treatment facilities; lack of personal protective equipment (PPE) and training on infection prevention and control; and insufficient numbers of health care workers in certain affected areas.⁸ Early response efforts were also complicated by significant information constraints regarding the state of the epidemic. Early response efforts were hampered by insufficient diagnostic capacity to confirm EVD cases and underreporting of cases. Underreporting sometimes occurred when symptomatic individuals hid from responders out of a mistrust of government or health care institutions, or fear of being ostracized by their communities.⁹

As of September 27, 2015, international health officials reported 881 confirmed EVD infections among healthcare workers in Guinea, Liberia, and Sierra Leone, and 513 fatalities.

THE EBOLA VIRUS

First recorded in 1976, the Ebola virus takes its name from a river near the village in the Democratic Republic of Congo (then Zaire) where the virus was first identified.¹⁰ The Ebola virus is a zoonotic pathogen, meaning that it normally resides in animals, but can be transmitted to humans. Outbreaks in humans originate from contact with wildlife, though the specific mechanism whereby this cross-species transmission occurs has not been identified. While the trade in bush-meat (the hunting of wildlife or use of an animal carcass for food) may be the most likely cause of Ebola transmission to human populations, any contact with Ebola-carrying species carries a risk of transmission.¹¹ Once the virus finds a human host, it spreads from person to person through contact with bodily fluids.

EVD is classified as a viral hemorrhagic fever and has a severe impact on multiple organ systems.¹² The Ebola virus infects many types of cells in the human body, especially those of the immune system, the liver, and the lining of blood vessels. Patients typically experience a sudden onset of fever, chills, and body aches. Later symptoms may include vomiting, diarrhea, and bruising from blood vessels leaking. Both internal and external bleeding can occur.¹³

The Ebola virus is highly infectious, as a low dose of the virus is sufficient to cause the disease.¹⁴ The virus is present in many bodily fluids including blood, saliva, breast milk, urine, semen, and sweat. Any contact with EVD patients' bodily fluids poses a risk for transmission of the disease.¹⁵ The virus continues to be present in the blood and bodily fluids of a corpse and can remain infectious for several days after death.¹⁶ Research studies have also shown that the virus persists in survivors after their recovery and may be transmitted through their semen.¹⁷

The Ebola species causing the epidemic in West Africa was identified as *Zaire ebolavirus*, the most lethal species in the genus *ebolavirus*.¹⁸ According to an October 2014 study, when mortality rates for the West Africa EVD outbreak were calculated using only confirmed cases and deaths, the EVD fatality rate was 70.8 percent.¹⁹ In the first 9 months of the EVD outbreak, the average incubation period was about 11 days, with projections that 95 percent of patients would present symptoms within 21 days.²⁰

By July 2014, EVD cases surged in the region as WHO reported the total number of EVD cases in Guinea, Liberia, Nigeria, and Sierra Leone reached 1,440 with 826 deaths.²¹ On August 8, 2014, WHO declared the EVD outbreak a “public health emergency of international concern.”²² By the end of August 2014, WHO reported that the number of confirmed, probable, and suspected EVD cases and deaths had more than doubled from the previous month.²³

On September 18, 2014, the United Nations (UN) Security Council declared the EVD outbreak in West Africa a “threat to international security and peace” and called for assistance from nations across the world to respond to the EVD outbreak. The next day, the UN established the UN Mission for Ebola Emergency Response (UNMEER), the first-ever UN emergency health mission, to improve coordination of response activities.²⁴

UN MISSION FOR EBOLA EMERGENCY RESPONSE

The UN set up UNMEER in September 2014 as a temporary body with the core objective of scaling up and coordinating international response efforts.²⁵ As the EVD outbreak waned, UNMEER scaled back operations and officially closed on July 31, 2015. After UNMEER closed, WHO assumed lead responsibility for the UN’s EVD emergency response.²⁶

An independent panel established by WHO that reviewed WHO’s response to the EVD outbreak stated that, while UNMEER galvanized political and financial support from the international community and generated intensified responses from other UN agencies, UNMEER “was less successful in coordinating the effort in affected countries.”²⁷ The panel cited UNMEER’s approach of bypassing existing mechanisms instead of engaging the UN international humanitarian coordination system and delays associated with the 2-month process of establishing the organization at the height of the epidemic as shortcomings.²⁸ The panel concluded that, had entities like the UN Inter-Agency Standing Committee and the UN Office for the Coordination of Humanitarian Affairs been engaged more strongly and earlier, it would not have been necessary to establish UNMEER.²⁹ For the reasons cited above, the panel also concluded that UNMEER did not represent a good model for managing future large-scale health emergencies.³⁰

The U.S. Government was part of UNMEER’s Global Ebola Response Coalition, giving U.S. personnel a window into its effectiveness.³¹ An

internal USAID Office of U.S. Foreign Disaster Assistance (OFDA) assessment also raised questions about UNMEER’s effectiveness. According to the assessment, UNMEER’s establishment had the effect of undercutting existing UN coordination mechanisms. Limitations in its effectiveness as a response coordinator meant that USAID and other donors had to devote significant time and resources to fill in the gap.³² The assessment recommended the U.S. Government support institutional changes and reforms within the UN to improve multi-donor response coordination in the future.³³

The number of new EVD cases per week in West Africa peaked in September 2014, exceeding 700.³⁴ New EVD cases began to decline at the start of 2015 from more than 300 new confirmed EVD cases per week at the beginning of the year, to under 150 new confirmed cases per week between February and March 2015, and 20 new confirmed cases per week between April and June 2015.³⁵ Newly reported confirmed cases in these countries fell below ten per week at the end of July 2015 and continued to decline until zero EVD cases were reported in the week of the end of the reporting period.³⁶

Although no confirmed EVD cases were reported in the week of the end of the reporting period, responders remained vigilant for the reemergence of the disease among those who had high-risk contacts with EVD patients or possible renewed transmission from EVD survivors or animal hosts of the virus.³⁷

In September 2015, WHO released a new strategic response and recovery framework for West Africa that includes plans to incorporate vaccines, diagnostics, survivor counselling and care, and sustainable response operations.³⁸ The core objectives of the framework are “to accurately define and rapidly interrupt all remaining chains of Ebola transmission, and to identify, manage, and respond to the consequences of residual Ebola risks.”³⁹ Response organizations worked with national authorities to plan and identify activities in support of the framework.⁴⁰ On September 4, 2015, U.S. Government agencies met with response partners in Liberia to discuss the country’s implementation of the framework.⁴¹

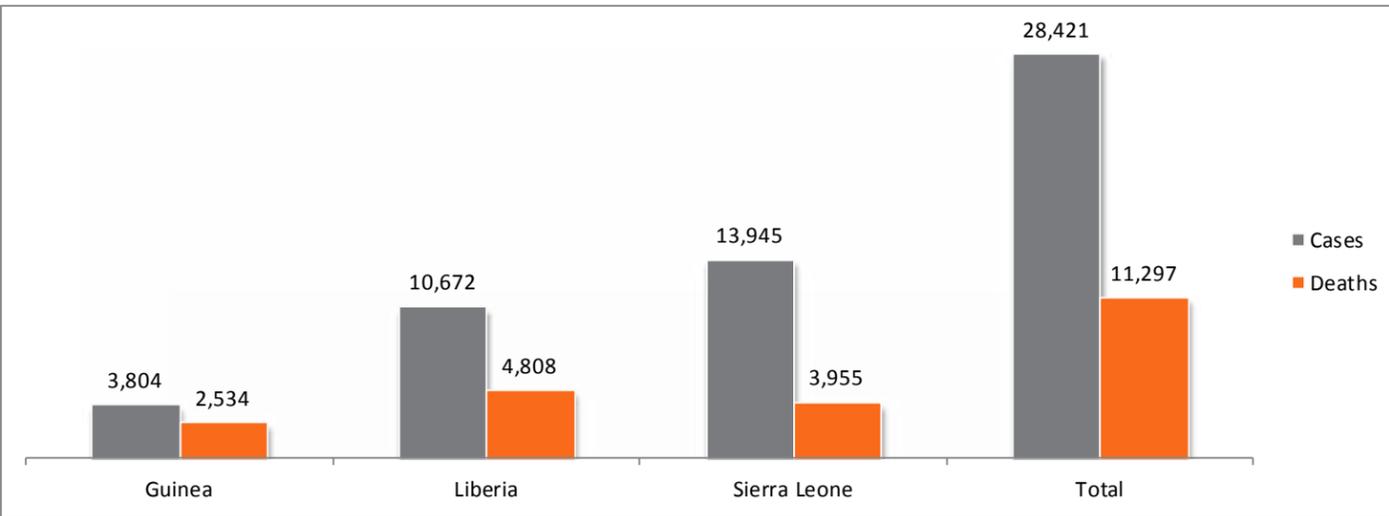


Figure 1: Cumulative EVD Case Counts by Country, as of October 4, 2015. (Source: WHO, October 7, 2015)

THE PROGRESS OF THE OUTBREAK

National health authorities reported a total of 848 new confirmed, probable, and suspected EVD cases, and 51 new deaths in Guinea, Liberia, and Sierra Leone between July 5, 2015, and October 4, 2015, a decline from 1,999 new cases and 648 deaths over the previous quarter.⁴² The cumulative total since the outbreak started in the three countries stood at 28,421 confirmed, probable, and suspected EVD cases, and 11,297 deaths through October 4, 2015.⁴³

During the quarter, the number of new confirmed cases per week in the three countries declined until there were no confirmed cases at the end of the reporting period.⁴⁴ The number of confirmed EVD deaths per week also declined, and there was one reported confirmed death attributable to Ebola during the final week of the reporting period.⁴⁵ Figure 2 details reported EVD cases and deaths through October 4, 2015. To be declared virus-free by international health authorities, the countries of Guinea, Liberia, and Sierra Leone will each have to achieve a 42-day period with no new EVD cases.⁴⁶

The outbreak has followed a different course in each country. The number of new EVD cases reported per week in Liberia, Sierra Leone, and Guinea peaked at different times, in September, November, and December 2014, respectively.⁴⁷ Although the outbreak started in Guinea, it peaked there last.⁴⁸ Sierra Leone experienced the highest number of EVD cases among the three most affected countries with 13,945 confirmed, probable,

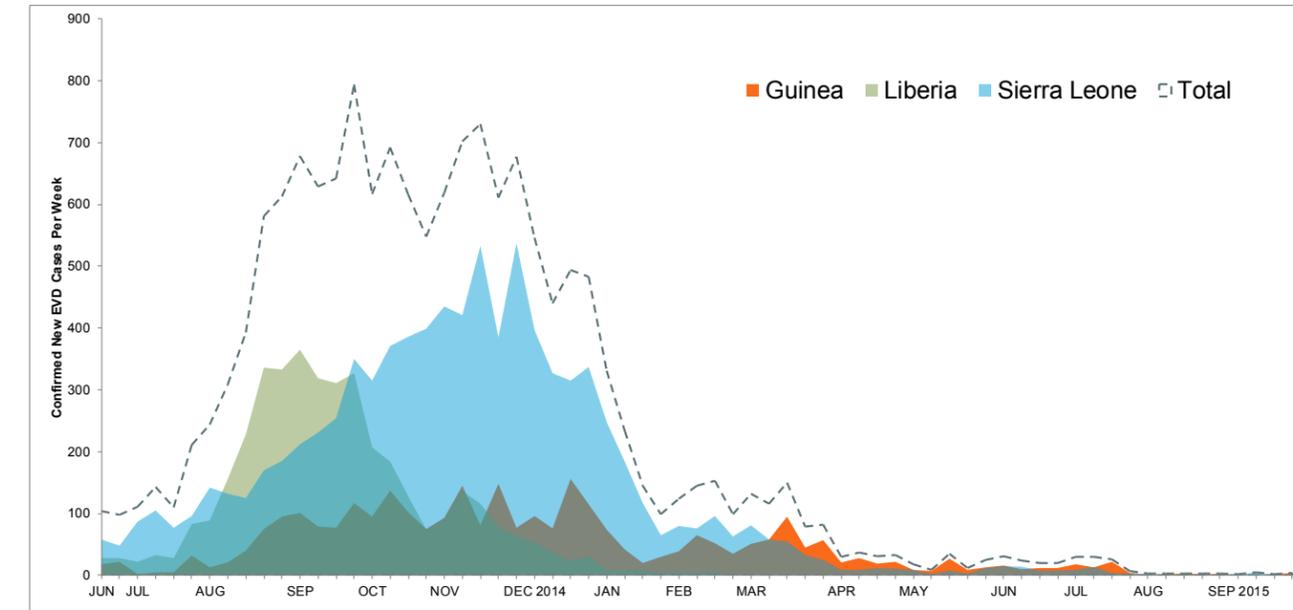


Figure 2: Reported new cases of Ebola per week, June 2014 – September 2015. (Sources: Centers for Disease Control/WHO, October 2015)

and suspected EVD cases reported to WHO as of October 4, 2015.⁴⁹ Liberia faced the largest number of EVD deaths, with 4,808 by the end of the reporting period.⁵⁰

The different trajectory of the disease in these countries has helped inform donor activity, which may have affected the progress of the outbreak in turn. Responders in Liberia have received larger donor pledges than their counterparts in the other two heavily affected countries, with \$1.856 billion pledged by the international community as of September 16, 2015, according to the World Bank.⁵¹ Organizations responding to the outbreak in Sierra Leone were recipients of the next largest sum of donor pledges with \$1.343 billion, while groups in Guinea received \$944.5 million in donor pledges as of September 16, 2015.⁵²

GUINEA

Although the outbreak originated in Guinea, the country has had the fewest EVD cases and deaths compared to neighboring Liberia and Sierra Leone, with a cumulative total of 3,804 confirmed, probable, and suspected cases and 2,534 deaths as of October 4, 2015.⁵³ The number of new reported cases per week in Guinea has followed a cyclical pattern, with periods of intense transmission, declines in incidence, increases in EVD cases, and then subsequent drops in confirmed cases.⁵⁴ At the onset of the outbreak in May 2014, the number of newly reported cases

per week was under 10, then peaked at 156 cases in December 2014, and declined again to 13 cases at the end of May 2015.⁵⁵

During this reporting period, the number of new confirmed cases per week declined from 18 at the beginning of July 2015 to zero at the end of September 2015.⁵⁶ Case incidence was geographically confined to small areas in Western Guinea and the number of new EVD deaths per week dropped from 10 to 1 during the same period.⁵⁷ Guinea reported no EVD cases for 14 days in early September 2015.⁵⁸ However, new EVD cases emerged starting on September 16, 2015.⁵⁹ No confirmed cases of EVD were reported in Guinea once more, on September 28, 2015.⁶⁰

During the quarter, responders faced continuing challenges in controlling the outbreak, such as violent attacks on aid workers, suspected individuals evading contact tracing and surveillance efforts, emergence of EVD cases from unknown sources of transmission, and the movement of high-risk contacts.⁶¹ At the same time, developments in vaccines and diagnostics supplemented disease control efforts in the country. On July 26, 2015, after interim results indicated that the Vesicular Stomatitis Virus-Ebola Virus (VSV-EBOV) vaccine may be effective against the disease, the Ebola ring vaccination trial was expanded to all individuals who had been in contact with a confirmed EVD patient.⁶² In September 2015, the Government of Guinea approved the use of rapid diagnostic tests for EVD, enabling health authorities to more quickly confirm cases of the disease, provide needed treatment, and take appropriate precautions.⁶³ Later that month, burial teams and health care workers in Forécariah prefecture received training on the rapid diagnostic tests so they could use them to test individuals with suspected EVD cases as well as all recently deceased individuals.⁶⁴

RING VACCINATION TRIAL

The Ebola ring vaccination strategy involves identifying a confirmed EVD case, tracing people who have been in contact with that patient as well as the contacts of those contacts, and vaccinating those individuals with their consent.⁶⁵ This approach is based on a previous successful disease control approach to eradicate smallpox in the 1970s.⁶⁶

The Ebola ring vaccination trial—conducted by WHO in collaboration with the MOH in Guinea, Médecins sans Frontières (MSF), EPICENTRE, and the Norwegian Institute of Public Health—started in Guinea in March 2015. This was an efficacy trial of the VSV-EBOV vaccine, which was developed by the Public Health Agency of Canada

and licensed to NewLink Genetics and Merck & Co.⁶⁷ According to interim results from a study published in July 2015, the VSV-EBOV vaccine “might be highly efficacious” and was “most likely effective at the population level when delivered during an EVD outbreak via a ring vaccination strategy.”⁶⁸ More than 5,000 volunteers in Guinea, including frontline workers, have been vaccinated since March 2015.⁶⁹ In the Guinea ring vaccination trial, no vaccinated individual developed EVD 10 days or more after receiving the vaccine.⁷⁰ As the trial was still ongoing during the quarter, however, these results were still considered preliminary.⁷¹

The U.S. Government supported VSV-EBOV vaccine development through a study on the safety of the vaccine conducted by DoD and the National Institutes of Health (NIH) at the Walter Reed Army Institute of Research and NIH Clinical Center, respectively, in the Fall of 2014. The study found that the VSV-vaccine candidate was safe and elicited strong antibody responses in healthy volunteers.⁷²



Study Participant Receives NIAID/GlaxoSmithKline Candidate Ebola Vaccine (Photo Courtesy of NIAID, September 4, 2014)

In early July, the Government of Guinea continued its 21-day active EVD case identification and social mobilization campaign to halt EVD transmission in five prefectures, in addition to quarantining EVD-affected communities.⁷³ On July 20, 2015, the Government of Guinea launched a new strategy to reduce further EVD transmission by targeting households with high-risk contacts in affected areas of the capital with enhanced monitoring and surveillance, mobile health care teams, essential supplies, and social services.⁷⁴ On September 28, 2015, the government launched Operation Porte-a-Porte in the capital, Conakry, to find active cases, engage with communities, and strengthen infection prevention and control capacity in health facilities.⁷⁵

LIBERIA

Liberia has suffered some of the worst effects of the outbreak, with the largest number of EVD fatalities among the most severely affected countries.⁷⁶ The country was reporting 300 to 400 new cases per week during August and September 2014.⁷⁷ In October 2014, the number of new confirmed cases reported each week started to decline as national and international responders mobilized. By the end of November 2014, the weekly number of new cases was under 100.⁷⁸ The incidence of new cases dropped to less than ten cases per week in January 2015, and

continued to decrease until there were no confirmed cases on March 28, 2015.⁷⁹

WHO declared an end to the outbreak in Liberia for the first time on May 9, 2015, but a new EVD-positive case appeared 7 weeks later.⁸⁰ Responders quickly identified and isolated cases, and initiated contact tracing and monitoring of individuals who had contact with EVD victims and were at-risk.⁸¹ The last confirmed EVD case was discharged from an Ebola treatment unit on July 23, 2015.⁸² On September 3, 2015, WHO declared the end of the EVD outbreak in Liberia once again, but health authorities



An Ebola survivor puts on light personal protective equipment at the Ebola treatment unit in Sinje, Grand Cape Mount, Liberia. (Photo courtesy of UNMEER, January 28, 2015)

maintained heightened vigilance.⁸³ Meanwhile, the Government of Liberia endorsed the practice of swabbing and testing all dead bodies for EVD.⁸⁴

The country still faces challenges in implementing measures to monitor and prevent a resurgence of the disease. National surveillance efforts did not meet objectives set by Liberia's MOH and an outbreak of another infectious disease—measles—appeared during the quarter.⁸⁵ In addition, the Government of Liberia's efforts to swab and test all dead bodies were reportedly undermined by salary payment problems for laboratory staff, a shortage of reagents and supplies needed for testing, and issues with laboratory equipment.⁸⁶

SIERRA LEONE

Sierra Leone reported its first laboratory-confirmed EVD case on May 24, 2014, more than 2 months after WHO had declared an EVD outbreak in neighboring Guinea, and was the last of the three most affected countries to report an initial EVD case.⁸⁷ The outbreak peaked in Sierra Leone in November 2014 when up to 533 new cases were reported in a week.⁸⁸ These figures declined over the following 2 months, with the number of new cases a week dropping below 100 by February 2015.⁸⁹

During the quarter, the weekly number of new confirmed cases in Sierra Leone declined from nine (at the start of July 2015) to zero (at the end of September 2015).⁹⁰ The number of confirmed EVD fatalities per week also dropped over the period from eight to zero.⁹¹

The country achieved zero EVD cases when no new confirmed EVD cases were reported for more than 2 weeks in August.⁹² However, a new EVD case was reported on August 29, 2015.⁹³ The last EVD case was reported in Sierra Leone on September 13, 2015, and health authorities discharged its last known EVD patient on September 26, 2015.⁹⁴

In Sierra Leone, undetected chains of transmission and untraced individuals who had high-risk contacts with confirmed EVD patients presented challenges for response organizations during the quarter.⁹⁵ According to media reports, fear, fatigue, and denial allowed EVD to persist and some Sierra Leoneans remained hesitant to change behaviors that increase transmission risk.⁹⁶

On June 16, 2015, the Government of Sierra Leone worked with local communities and responders to launch Operation Northern Push in the country's northern districts, a 21-day surge to get to zero EVD cases by ending behaviors that perpetuate EVD transmission.⁹⁷ Operation Northern Push was extended for 90 more days on July 6, 2015.⁹⁸ Following favorable preliminary results from the ring vaccination trial

WHO declared Liberia free of Ebola virus transmission on September 3, 2015.

in Guinea, the Government of Sierra Leone requested that the trial be extended to its territory, and WHO trained teams to implement the study protocol. When a new EVD case emerged at the end of August 2015, WHO-led ring vaccination teams administered EVD vaccines to contacts of the victim.⁹⁹



Red Cross volunteers in Kailahun district Sierra Leone focused on contact tracing, corpse management, and social mobilization campaigns, which included wearing t-shirts with anti-EVD messaging. (Photo courtesy of the European Commission's Humanitarian Aid and Civil Protection Department, April 2, 2015)

LONG-TERM HEALTH EFFECTS FOR SURVIVORS

WHO estimates that more than 13,000 EVD survivors live in Guinea, Liberia, and Sierra Leone but information on the long-term health effects for EVD survivors is limited.¹⁰⁰ Survivors of EVD have reported lingering health problems such as joint pain, headaches, visual problems, extreme fatigue, and mental health challenges.¹⁰¹ The virus may also linger in the body long after patient recovery, as the Ebola virus or virus fragments have been detected 15 days after symptom onset in breast milk, 33 days after onset in vaginal secretions, 98 days after onset in the eyes, and 9 months after onset in semen.¹⁰²

Survivors also face stigma from communities, reintegration difficulties, and diminished livelihoods.¹⁰³ As the most severely affected countries rebuild their health care systems, survivor clinics are being opened and research is underway to understand the long-term health effects of the disease.¹⁰⁴

The Liberia-U.S. Clinical Research Partnership—a collaboration between the Government of Liberia, NIH's National Institute of Allergy and Infectious Diseases (NIAID), and the Centers for Disease Control (CDC)—launched a study (PREVAIL III) in June 2015. PREVAIL III studies EVD-survivors and their contacts in Liberia who had survived EVD within the past 2 years.¹⁰⁵ The study is intended to help understand the long-term consequences of the disease, characterize associated health problems, determine whether survivors' immune systems will protect them from future Ebola infection, and assess whether survivors can transmit disease to close contacts and sexual partners.¹⁰⁶

The potential for sexual transmission of EVD is a particular point of focus for more research, as strong evidence of sexual transmission has emerged in the case of a female EVD patient in Liberia who contracted the disease in March 2015, 6 months after her male partner recovered from it.¹⁰⁷ CDC, along with the Sierra Leonean Ministry of Health and Social Welfare and WHO, launched a study in May 2015 to characterize the persistence of Ebola virus in the body fluids of EVD survivors.¹⁰⁸ Part of the study will examine how long sexual transmission may be a risk after a survivor has recovered.¹⁰⁹ In the pilot phase of the study, the semen of male survivors was tested and study participants received test results and counseling on risk reduction measures.¹¹⁰

In July 2015, the Government of Liberia began enrolling male survivors in Monrovia as part of a health and EVD screening program for men. The program provides survivors with semen testing and related counseling on potential sexual transmission of EVD.¹¹¹

In August 2015, WHO sponsored a 2-day conference on clinical care for EVD survivors in Sierra Leone.¹¹² Participants included survivors from all three affected countries as well as response organizations, including USAID.¹¹³ EVD survivors described challenges during and after recovery and participants recognized the need to develop guidance for maternal and neonatal care of EVD survivors.¹¹⁴

WHO declared Sierra Leone free of Ebola virus transmission on November 7, 2015.

COUNTRY RECOVERY

In addition to the medical impact of EVD, Guinea, Liberia, and Sierra Leone have suffered serious economic consequences as a result of the outbreak. Socioeconomic effects from the EVD outbreak have included job losses, market disruption, reduced agricultural production, decreased household purchasing power, and increased food insecurity.¹¹⁵ The road blocks and closed borders that were imposed in the countries to help contain the spread of EVD also hampered economic activity by limiting trade and restricting the movement of people, goods, and services.¹¹⁶

The World Bank estimated that, in 2015, gross domestic product (GDP) losses for the three countries would amount to \$2.2 billion.¹¹⁷ Guinea is projected to experience no GDP growth in 2015, compared to the pre-EVD estimates of 4.3 percent.¹¹⁸ Liberia's GDP growth in 2015 is now expected to amount to 0.9 percent while Sierra Leone's economy is projected to decline by 23.9 percent.¹¹⁹

The continued decline in iron ore prices in 2015 formed the basis for continued shocks to the economies of Liberia and Sierra Leone.¹²⁰ Liberia's export revenues dropped 60 percent in the first half of 2015 compared to the same period a year earlier.¹²¹ Iron ore exports accounted for 24 percent of Sierra Leone's GDP in 2014, but the EVD epidemic coupled with the decline in commodity prices caused its two main iron ore mines to cease production.¹²²

The EVD crisis was present at the start of the planting season in 2014, and conditions surrounding the outbreak affected food supplies, agricultural markets, and sales.¹²³ Guinea reported a 10 percent decline in rice production in 2014.¹²⁴ In Liberia, an EVD-related decline in agricultural production contributed to a 2014 harvest smaller than the previous year's.¹²⁵

In April 2015, Guinea, Liberia, and Sierra Leone released country recovery plans to address the social, economic, and health consequences of the outbreak.¹²⁶ The Ministries of Health for Guinea, Liberia, and Sierra Leone also presented draft health sector recovery plans to get to and sustain zero EVD cases, restart critical health services, and create a more resilient health system.¹²⁷ The estimated costs for the country recovery plans were \$2.577 billion, \$1.3 billion, and \$1.3 billion for Guinea, Liberia, and Sierra Leone, respectively.¹²⁸

The UN hosted an international pledging conference in July 2015 to address the funding gap the three countries face in financing the rebuilding of their economic and health systems in line with their recovery plans.¹²⁹ International donors pledged \$3.4 billion at the conference

on top of \$1.8 billion that had been previously committed.¹³⁰ At the conference, the U.S. Government pledged \$266 million to address the secondary effects of the EVD outbreak.¹³¹

Operation United Assistance began in September 2014 and concluded in June 2015.

U.S. GOVERNMENT RESPONSE TO THE OUTBREAK

The U.S. Government has been engaged in international Ebola response efforts since the initial outbreak declaration in March 2014, with U.S. Government agencies monitoring the EVD outbreak through disease surveillance programs, CDC deploying personnel to support the response efforts, and USAID providing funds to WHO to assist affected countries.¹³² In the ensuing months, the U.S. Government delivered PPE to the affected countries and DOS trained its health unit staff at embassies worldwide on the proper use of Ebola-specific PPE.¹³³

In early July 2014, CDC and USAID attended the WHO-sponsored Emergency Ministerial Meeting on Ebola in Ghana where West African countries and international partners agreed on priority actions to combat the EVD outbreak.¹³⁴ Days later, USAID's OFDA conducted an assessment of the outbreak in Guinea, Liberia, and Sierra Leone, and CDC activated its Emergency Operations Center in Atlanta on July 9, 2014.¹³⁵ Later that month, the Defense Intelligence Agency's National Center for Medical Intelligence, which produces medical intelligence on foreign health threats, issued a report highlighting the significant resource and security challenges facing health care workers in West Africa as they confronted the Ebola outbreak.¹³⁶

By August 6, 2014, USAID approved the programming of approximately \$14.6 million to EVD response efforts from preexisting programs in other areas.¹³⁷ Following disaster declarations in Guinea, Liberia, and Sierra Leone, USAID deployed a Disaster Assistance Response Team (DART) to the region to assess conditions, coordinate the interagency response, and identify gaps in the EVD response effort.¹³⁸ DoD began providing direct support to civilian-led response efforts under OUA in September 2014.¹³⁹

ASSESSMENTS OF EVD RESPONSE EFFORTS

During the reporting period, five panels and commissions were in the process of documenting lessons from the international response to the EVD outbreak and preparing recommendations to improve future responses to international health crises. The following groups are expected to issue final reports on international Ebola response efforts by the end of the calendar year:

- The WHO Ebola Interim Assessment Panel
- The Harvard Global Health Institute and the London School of Hygiene and Tropical Medicine Independent Panel on Ebola

- The Commission on Global Health Risk Framework for the Future
- The UN Secretary-General's High-Level Panel on the Global Response to Health Crises
- The WHO Review Committee on the International Health Regulations¹⁴⁰

In addition to these global commissions, U.S. Government agencies with major roles in the EVD response efforts were also conducting internal assessments of EVD response efforts to identify lessons learned to apply in future international health crisis response. USAID's OFDA completed its internal assessment of its response to the EVD outbreak in September 2015, while USAID's Global Development Lab is developing lessons learned on the use of digital technologies during the response.¹⁴¹ DoD expected to finalize its policy-focused lessons learned report by October 31, 2015.¹⁴² CDC has completed an interim after-action review and plans to complete the formal process of identifying lessons learned and corrective actions when the response to the EVD outbreak concludes.¹⁴³ In addition, HHS is conducting a lessons learned assessment that it expects will be completed by the end of the calendar year.¹⁴⁴

On September 16, 2014, the President announced the U.S. Government's strategy for EVD outbreak response and preparedness.¹⁴⁵ The strategy is organized around four pillars of activity:

- I. Controlling the Outbreak
- II. Mitigating Second-Order Impacts of the Crisis
- III. Building Coherent Leadership and Operations
- IV. Strengthening Global Health Security¹⁴⁶

The U.S. Government applied a whole-of-government approach to these efforts. USAID was designated as the lead federal agency to manage and coordinate the U.S. effort to fight the Ebola outbreak overseas. USAID worked through partner organizations to advance related objectives.¹⁴⁷ CDC led the medical and public health components of U.S. Government response efforts; DOS had responsibility for advancing related diplomatic efforts; and DoD supported civilian-led response efforts under OUA. The U.S. Public Health Service (USPHS) provided personnel support to treat infected health care workers and other front line responders. Other federal agencies, such as the Food and Drug Administration (FDA), NIH, and HHS's Office of the Assistant Secretary for Preparedness and Response (ASPR), also made significant contributions to the overall U.S. response.

FUNDING RESPONSE AND PREPAREDNESS EFFORTS

Initial U.S. Government response efforts to the EVD outbreak in West Africa were supported by available funds that had been previously appropriated to the relevant U.S. agencies. As the response effort grew in intensity, the President transmitted an emergency appropriations request to Congress. Congress later provided more than \$5.370 billion in emergency funds for Ebola prevention and response as part of the FY 2015 omnibus appropriation (P.L. 113-235, December 16, 2014). Of the total amount provided, \$3.726 billion was specifically designated for international efforts, with an additional \$532 million for use in either domestic or international settings.¹⁴⁸

Congress appropriated these funds to several federal agencies. Whereas appropriations to USAID and DOS have a clear tie to international activities, funds appropriated to HHS and DoD were approved to support domestic and international work.¹⁴⁹ Funding that supports vaccine and therapeutic drug development, for example, may be used in the United States or abroad.

Congress made funds that it provided for Ebola preparedness and response available over different periods and subject to different use and reporting requirements. Congress limited Ebola-related funding for DOS diplomatic and consular programs, NIH, and USAID operating expenses and Economic Support Funds for use through FY 2016,¹⁵⁰ designated the period of availability for CDC and HHS' Public Health and Social Services Emergency Fund Ebola funding through FY 2019,¹⁵¹ and provided that USAID Global Health, International Disaster Assistance (IDA), and FDA funding would be available until expended.¹⁵² Congress also provided that funds available to DOS and USAID could be used to reimburse other agency accounts for obligations made prior to the enactment of the appropriation measure.¹⁵³ Whereas Congress required HHS to provide notification of uses of funding on a quarterly basis, it mandated that USAID and DOS provide monthly reports on the proposed use of appropriated Ebola preparedness and response funds through at least September 30, 2016.¹⁵⁴ USAID reported that, as of September 28, 2015, it had notified Congress of the intent to obligate \$346.4 million in Ebola-related funding. Congress placed \$10.0 million of this total on hold pending subsequent notification.¹⁵⁵

Overall, as shown in Table 1, available financial reporting on interagency Ebola preparedness and response activities indicates that U.S. Government agencies had obligated about \$2.468 billion toward these efforts by September 30, 2015. Available information on

U.S. Government Ebola-related spending indicates that approximately \$1.055 billion had been disbursed as of September 30, 2015. As a share of total obligations, these disbursements accounted for 43 percent.

In reviewing the following table, note that DoD had been unable to provide updated obligation and disbursement information through the end of the reporting period. Rather, DoD figures reflect conditions as of August 31, 2015.

THE RESPONSE

TABLE 1. EBOLA-RELATED INTERNATIONAL APPROPRIATIONS, OBLIGATIONS, AND DISBURSEMENTS AS OF SEPTEMBER 30, 2015 (UNAUDITED, IN MILLIONS OF DOLLARS)

Department / Agency Account	Appropriated [†]			Obligated	Disbursed	
	FY 2013	FY 2014	FY 2015	Total	FY 2014-15	FY 2014-15
DoD[‡]	18.9	616.4	140.3	775.6	631.8	432.0
<i>Overseas, Humanitarian, Disaster Assistance, & Civic Aid</i>	-	485.0	-	485.0	406.4	333.7
<i>Cooperative Threat Reduction</i>	15.5	74.7	-	90.2	53.0	32.5
<i>Research, Development, Testing, and Evaluation</i>	3.4	56.6	123.3	183.3	158.0	63.5
<i>Procurement</i>	-	-	17.0	17.0	14.3	2.2
<i>Operations & Maintenance</i>	-	>0.1	-	>0.1	>0.1	>0.1
DOS	-	-	46.7	46.7	32.1	9.0
<i>Diplomatic & Consular Programs</i>	-	-	36.4	36.4	22.1	9.0
<i>Nonproliferation, Anti-Terrorism, Demining, and Related Programs</i>	-	-	5.3	5.3	5.0	0
<i>Economic Support Fund</i>	-	-	5.0	5.0	5.0	-
HHS	-	33.2	1,621.4	1,654.60	645.5	138.3
<i>CDC</i>	-	-	1,200.0 [§]	1,200.00 [§]	280.9 [§]	92.1
<i>NIH</i>	-	33.2 ^{††}	238.0 ^{††}	271.2 ^{††}	200.6	36.9
<i>Public Health & Social Services Emergency Fund</i>	-	-	157.0 ^{††}	157.0 ^{††}	152.7	5.7
<i>FDA</i>	-	-	26.4 ^{††}	26.4 ^{††}	11.3	3.6
USAID^{‡‡}	-	-	2,479.6	2,479.6	1,158.8	475.6
<i>International Disaster Assistance</i>	-	-	1,436.30 ^{§§}	1,436.30	869.8	454.2
<i>Economic Support Fund</i>	-	-	706.7 ^{§§}	706.7	124.8	18.8
<i>Global Health Programs</i>	-	-	312.0	312.0	159.2	1.2
<i>Operating Expenses</i>	-	-	19.0	19.0	3.0	>0.1
<i>OIG</i>	-	-	5.6	5.6	1.9	1.4
TOTAL	18.9	649.6	4,288.0	4956.5	2,468.2	1,054.8

THE RESPONSE

Sources: DoD OIG, DOS OIG, HHS OIG, USAID Office of Budget and Resource Management, Congressional Research Service, and P.L. 113-235.

† Appropriation figures include funding to reimburse funds that were originally appropriated to other accounts or for other purposes (such as funding appropriated in FYs 2013 and 2014) and were later realigned or reprogrammed to support Ebola response activities. These figures do not include funds specifically appropriated for domestic Ebola preparedness and response.

‡ DoD figures reflect estimated obligations and disbursements as of August 31, 2015. DoD management asserted to DoD IG that the DoD FY 2014 and FY 2013 Basic Financial Statements would not substantially conform to U.S. generally accepted accounting principles and that DoD financial management and feeder systems were unable to adequately support material amounts on the basic financial statements as of September 30, 2014. Because of the significance of this and other scope limitation matters, DoD IG could not obtain sufficient appropriate evidence to provide a basis for an audit opinion. Accordingly, DoD IG did not express an opinion on the DoD FY 2014 and FY 2013 Basic Financial Statements. Thus, the basic financial statements may have undetected misstatements that are both material and pervasive.

Amounts reported for DoD Research, Development, Testing, and Evaluation include estimates for ongoing work.

The appropriated funds for the Overseas, Humanitarian, Disaster Assistance, & Civic Aid includes \$265 million realigned to support other humanitarian assistance, disaster relief efforts, and pandemic response initiatives during the quarter.

§ CDC received \$1.77 billion in appropriations for Ebola activities inside and outside the United States in the December 2014 Consolidated and Further Continuing Appropriations Act, \$1.2 billion of which was designated for international use. In addition to the \$280.9 million that CDC had obligated toward international Ebola response and preparedness activities as of September 30, 2015, CDC reported that it had obligated \$431.8 million for activities inside the United States.

†† Includes funding for possible domestic or international use.

‡‡ Reported appropriations, obligations, and disbursements for USAID do not reflect spending on pre-existing programs and activities in countries affected by the EVD outbreak that were substantially modified in response to the outbreak. Reported amounts for USAID are based on information in agency financial systems. Past USAID financial management practices have led USAID OIG to issue a disclaimer on the agency's financial statements. OIG could not render an opinion on USAID's most recent financial statements because of material unsupported adjustments USAID made to reconcile its general and subsidiary ledgers.

§§ These totals include past reimbursements to FY 2014 accounts against which obligations were made prior to the enactment of the FY 2015 omnibus appropriation. USAID used \$376.8 million in Ebola emergency IDA funds to reimburse FY 2014 and FY 2015 IDA accounts for pre-enactment obligations. USAID used \$29.7 million in Ebola emergency Economic Support Fund funding to reimburse prior year accounts for pre-enactment obligations.

THE RESPONSE

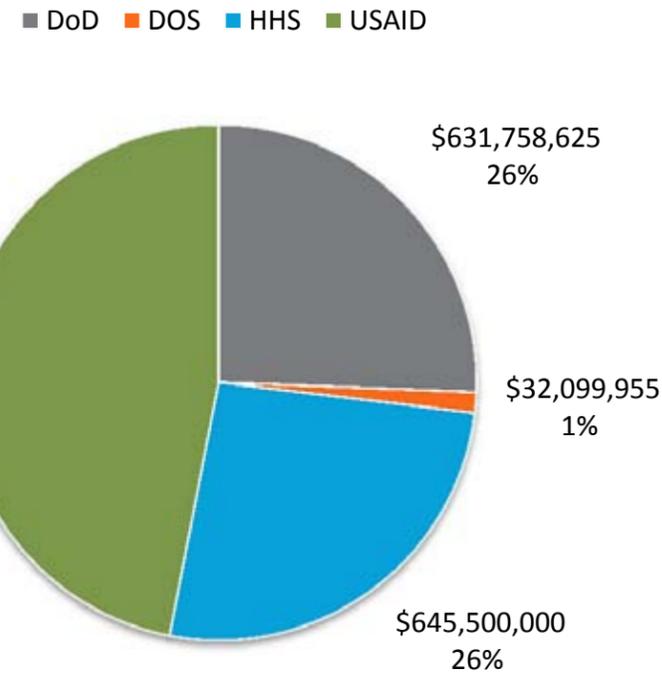


Figure 3. U.S. Government obligations for international Ebola efforts by U.S. agency, as of September 30, 2015 (DoD OIG, DOS OIG, HHS OIG, USAID Office of Budget and Resource Management, unaudited).

By the end of the reporting period, USAID had accounted for the largest share of U.S. Government obligations for international preparedness and response efforts, with 47 percent, followed by DoD and HHS with 26 percent each, and DOS with 1 percent, as Figure 3 illustrates.

HHS reported the largest increase in obligations for international Ebola activities over the previous quarter. With \$420.2 million in new international obligations during the reporting period, HHS's total international Ebola preparedness and response obligations increased by 187 percent. Within HHS, CDC accounted for nearly half of the increase in international Ebola obligations with \$209.7 million. Among other federal agencies and departments, USAID reported the next highest level of obligations during the quarter, with \$189.9 million (an increase of 20 percent over the previous quarter). For its part, DoD reported \$125.6 million in additional obligations during the quarter, an increase of 25 percent over the previous quarter, and DOS reported \$5 million in obligations, an 18 percent increase.

THE RESPONSE

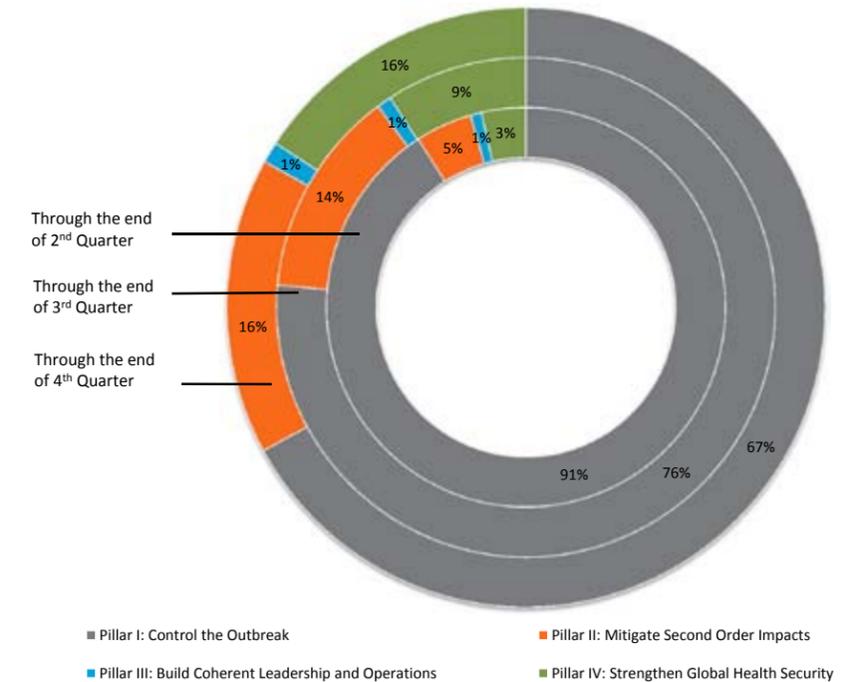


Figure 4. USAID obligations by Pillar and quarter, as of September 30, 2015 (DOS/USAID July and October Monthly Reports to Congress, unaudited).

USAID tracks its project spending in line with the U.S. Government strategy for Ebola preparedness and response. As of September 30, 2015, USAID reported \$1.159 billion in Ebola preparedness and response related obligations. Of this total, about \$777 million or approximately 67 percent, was associated with project activities under Pillar I of the strategy, which is geared toward controlling the outbreak and was thus the initial focus of USAID programming. As the outbreak waned, the proportion of USAID's obligations devoted to Pillar I activities has also declined, as Figure 4 illustrates.

At the end of the reporting period, USAID activities under Pillars II and IV accounted for 16 percent each, respectively, of obligations. Project activities under Pillar II and IV increased over the past two quarters as USAID began transitioning its efforts to recovery and preparedness activities. During this quarter, USAID obligated an additional \$55.5 million for Pillar II activities and \$94.0 million for Pillar IV activities. Pillar III

activities were associated with less than 1 percent of total USAID obligations through the end of the reporting period. This limited spending on Pillar III activities is consistent with USAID plans in this area, which are chiefly limited to spending on internal operating expenses.

Pillar I activities also account for the largest share of USAID disbursements. Funding for USAID Pillar I activities accounted for 90 percent of USAID's Ebola-related disbursements through September 30, 2015.¹⁵⁶

Data on disbursements can provide valuable information about how much money has been spent on activities as well as the amounts of funding that remain available for expenditure. However, this information is subject to a noteworthy limitation. Provided a letter of credit from USAID, its humanitarian assistance implementing partners may accrue significant expenses before drawing down on agency funds. As a result, disbursement data on these efforts does not always fully reflect the progress of humanitarian assistance efforts in financial terms. As of September 30, 2015, for example, OFDA reported Ebola-related disbursements totaling \$393.6 million.¹⁵⁷ When combined with accrued expenditures through that date, however, OFDA's total expenditures amount to 43 percent more, or \$561.8 million.¹⁵⁸

USAID also tracks its spending by geographical focus. During this quarter, USAID obligated an additional \$77.9 million for activities in Guinea, Liberia, and Sierra Leone, representing an increase of 10 percent over the previous quarter.¹⁵⁹

USAID obligations in support of Liberia-based efforts, particularly for Pillar I activities, have decreased over time as the country was EVD-free for significant periods during the third and fourth quarters of the fiscal year. Meanwhile, obligations for Guinea and Sierra Leone remained steady as USAID increased assistance to those countries with continuing case activity. As Figure 5 illustrates, while the share of USAID obligations with a focus on Liberia-based activities decreased gradually from 55 percent at the end of the third quarter to 50 percent at the end the fourth, the percentage of USAID obligations for activities in Guinea modestly declined from 12 to 11 percent, and those for Sierra Leone remained steady at 15 percent.¹⁶⁰

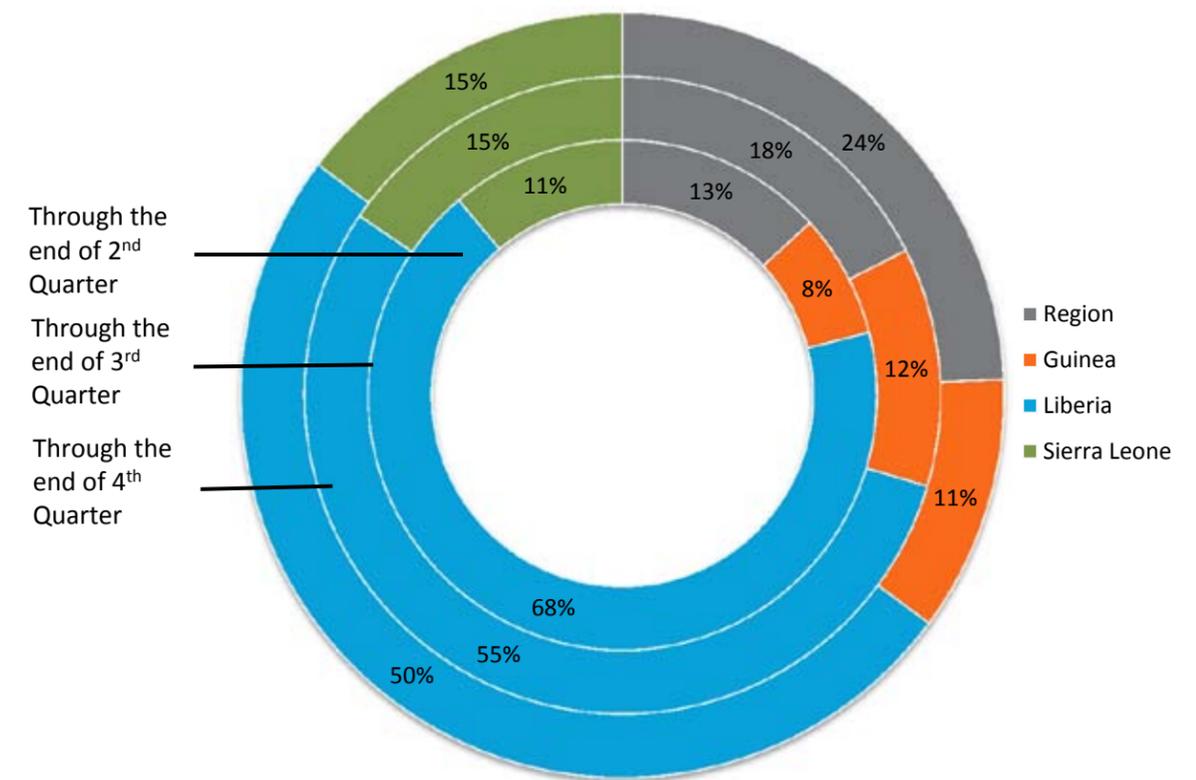


Figure 5: USAID obligations by geographical focus and quarter, as of September 30, 2015 (DOS/USAID July and October Monthly Reports to Congress, unaudited).

PILLAR I: CONTROLLING THE OUTBREAK

Just over a year after the U.S. Government initiated large-scale response efforts to control the EVD outbreak in West Africa, no new confirmed EVD cases were reported in Guinea, Liberia, or Sierra Leone.¹⁶¹ Enhanced EVD control measures through contact tracing, surveillance, and safe burial teams, as well as behavior change, community outreach, and social mobilization efforts had reportedly contributed to halting EVD transmission.¹⁶²

On September 21, 2015, CDC discontinued enhanced entry screening for travelers arriving in the United States from Liberia, although travelers continued to undergo exit screening before departing Liberia.¹⁶³ Enhanced entry screening for travelers arriving from Guinea and Sierra Leone remained in place, however, and CDC continued to recommend that all U.S. residents avoid nonessential travel to those two countries.¹⁶⁴

As of October 9, 2015, the United States remained the largest international financial contributor to EVD outbreak response efforts, according to information from USAID and the UN Office for the Coordination of Humanitarian Affairs.¹⁶⁵ U.S. Government commitments exceeded the levels provided by the next nine leading donors combined.¹⁶⁶

Despite reductions in the number of new EVD cases during the quarter, responders still faced challenges in monitoring for the emergence of new EVD cases, including community-level resistance to EVD control efforts, concern about unknown and missing individuals who had been in contact with EVD-infected persons, and the movement of those who may have carried the disease to EVD-free areas.¹⁶⁷ Floods in Freetown, Sierra Leone, and outbreaks of preventable diseases like measles in Liberia, presented additional challenges for response teams during the quarter.¹⁶⁸

The U.S. Government’s response activities under Pillar I have been aimed at controlling the outbreak. Related efforts concentrated on supporting activities in five areas during the quarter:

- Coordinating health and humanitarian response efforts;
- Managing new suspected, probable, and confirmed EVD cases;
- Improving EVD surveillance and epidemiology;
- Restoring essential health services; and
- Engaging with communities through social mobilization and communication.

The U.S. Government tracks several indicators (see Table 2) to assess progress in efforts to end the EVD outbreak in West Africa. The following

Contact tracing is the process healthcare professionals use to map the network of individuals who may have had contact with a known EVD victim. By tracing the links between a patient, their family, their community, and beyond, healthcare workers can spread awareness of the danger of potential infection and isolate and observe those who may have been infected for the 21-day incubation period. By tracing contacts, healthcare workers can provide early treatment for any additional EVD victims.

table presents reported results for these indicators at the start and end of the reporting period for Guinea, Liberia, and Sierra Leone.

Table 2. CDC and USAID track the progress of efforts to control the EVD outbreak using the indicators below

INDICATOR	Guinea		Liberia		Sierra Leone	
	July 4, 2015	September 27, 2015	July 4, 2015	September 27, 2015	July 4, 2015	September 27, 2015
Total new confirmed cases over past 21 days and (average daily count of new confirmed cases over past 7 days), as of...	42 (3)	6 (1)	3 (0)	0 (0)	24 (1)	5 (0)
Number of new lab tests and (percent positive)	June 28- July 4, 2015 477 (4.0%)	September 21- 27, 2015 683 (0.6%)	June 28- July 4, 2015 290 (1.0%)	September 21- 27, 2015 N/A	June 28- July 4, 2015 2,035 (0.4%)	September 21- 27, 2015 1,969 (0.0%)
Number of ETU beds in use daily average and (average occupancy %)	June 28- July 4, 2015 34.5 (21.8%)	September 21- 27, 2015 10.3 (5.8%)	June 28- July 4, 2015 6.3 (4.8%)	September 21- 27, 2015 N/A	June 28- July 4, 2015 7.7 (2.5%)	September 21- 27, 2015 22.4 (15.8%)

COMMAND AND CONTROL OF THE RESPONSE

The U.S. Government assisted with the coordination of the health and humanitarian response efforts at the national and sub-national levels by supporting the construction of emergency operation centers (EOCs) and establishment of emergency management programs. EOCs support incident management and coordination by integrating facilities, equipment, personnel, procedures, communications, and coordination efforts to provide rapid and effective response to new EVD cases. During the reporting period, USAID partner International Organization for Migration (IOM) rehabilitated and supported five EOCs in Guinea and three additional EOCs were in the rehabilitation process at the end of the reporting period.¹⁶⁹ The Government of Liberia inaugurated its national EOC, which received support from the U.S. Government

and partner personnel, on September 21, 2015.¹⁷⁰ In Sierra Leone, the U.S. Government continued providing technical guidance to the National Ebola Response Centre and participated in the transition planning for the MOH to lead EVD response efforts.¹⁷¹ The Government of Sierra Leone held an opening ceremony for its permanent national EOC on September 23, 2015.¹⁷²

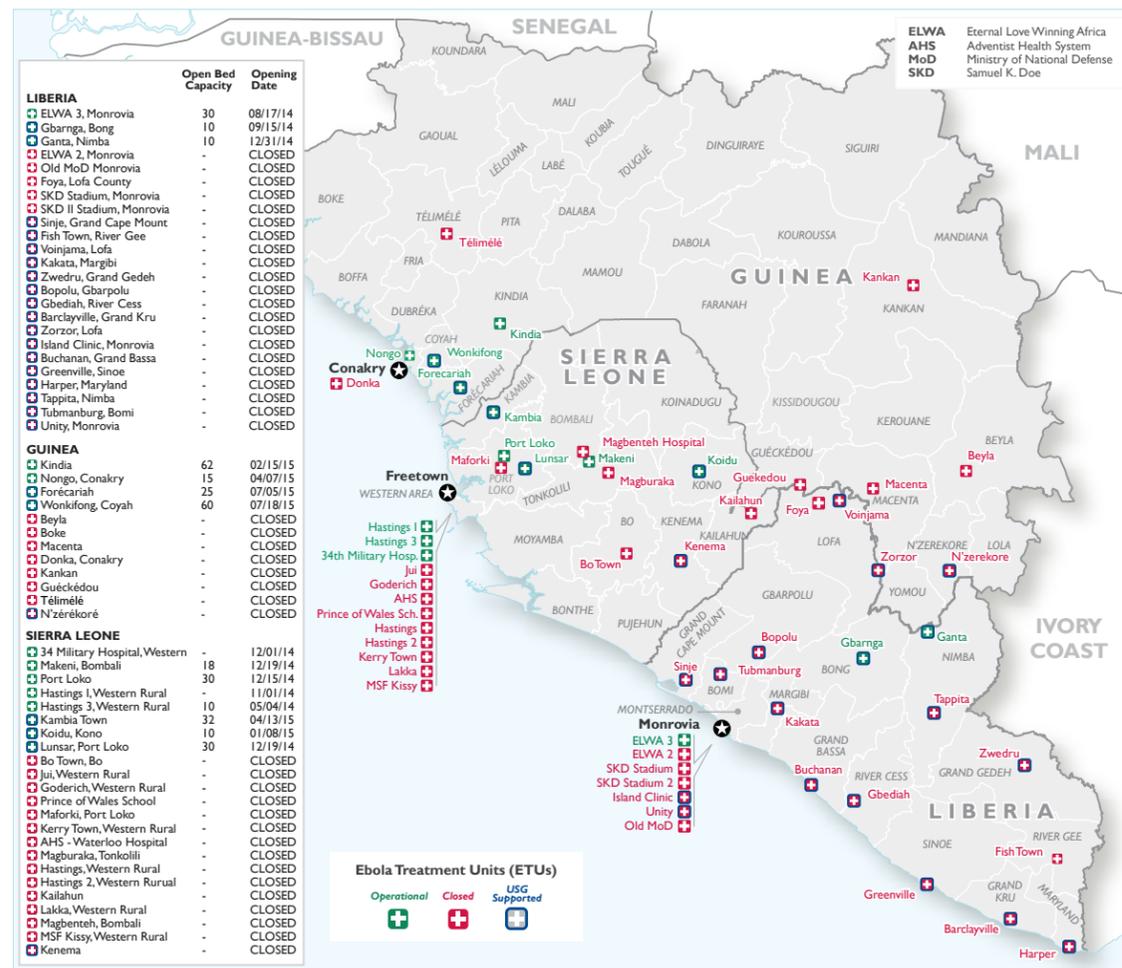


Figure 6: Location of U.S. Government-supported Ebola Treatment Units in Guinea, Liberia, and Sierra Leone, as of October 1, 2015 (source: WHO, 2015)

CASE MANAGEMENT

The U.S. Government constructed Ebola Treatment Units (ETUs) to provide safe and effective management of EVD cases by isolating and treating suspected, probable, and confirmed EVD patients. Removing these patients from the community prevented future infections.¹⁷³

Researchers estimated that the additional beds constructed in Sierra Leone prevented 56,600 EVD cases and 40,000 EVD deaths in the country between June 2014 and February 2015.¹⁷⁴

By the end of September 2015, four ETUs were operational in Guinea, two of which received U.S. Government support.¹⁷⁵ In Liberia, four USAID-supported ETUs were operational during the quarter but two ETUs stopped accepting patients on September 30, when the decommissioning process began.¹⁷⁶ The two remaining ETUs in Liberia were scheduled to close by October 31, 2015.¹⁷⁷ USAID and response partners worked with the Government of Liberia to ensure local health facilities had adequate isolation, referral, and response capacity to meet the needs of EVD patients in the future should additional cases emerge.¹⁷⁸ In Sierra Leone, eight ETUs were operational by the end of the quarter, including three supported by the U.S. Government.¹⁷⁹

MEDICAL EVACUATION AND TREATMENT FOR INTERNATIONAL HEALTHCARE WORKERS

As the international response to the EVD outbreak intensified, the health of responders became a source of concern for U.S. Government agencies and response organizations.¹⁸⁰ By late June 2014, 51 healthcare providers had been infected with EVD, and this group accounted for 8 percent of all EVD cases.¹⁸¹ Many U.S. Government personnel and international volunteers expressed an interest in assisting with response efforts in West Africa, but had concerns about serving without access to medical evacuation in the event that they contracted EVD.¹⁸² The incidence of infections among healthcare workers and the high fatality rate served as an ongoing reminder that the resources required to fight an EVD outbreak on such a scale were not in place when the crisis began.¹⁸³

Recognizing that access to medical evacuation services was a barrier for the participation of many prospective international responders, DOS entered into a contract for the medical evacuation of U.S. Government personnel and extended offers to other healthcare workers from other governments, international organizations, and the nongovernmental organization (NGOs) eligible for support in line with provisions of the Foreign Assistance Act.¹⁸⁴ DOS signed 24 medical evacuation agreements during the EVD crisis. The first medical evacuation of personnel from a non-U.S. Government organization occurred when DOS assisted WHO with the evacuation of a Senegalese epidemiologist to Hamburg, Germany for care and

recovery.¹⁸⁵ By the end of the quarter, DOS had facilitated 46 medical evacuations, including those of 10 U.S. Government personnel infected with the Ebola virus.¹⁸⁶

The U.S. Government also supported the construction and management of the Monrovia Medical Unit in Liberia to provide a treatment facility for healthcare workers who contracted the disease.¹⁸⁷ This dedicated care facility for healthcare professionals provided assurance to those who were both at the greatest risk of contracting EVD and integral to plans to stop the progress of the outbreak that they would be cared for if they contracted EVD.¹⁸⁸ USPHS managed and staffed Monrovia Medical Unit, and was the only U.S. Government agency to provide direct care to EVD patients in the affected countries.¹⁸⁹ On September 24, 2015, the President awarded USPHS with the Presidential Unit Citation for its service on the frontlines of the EVD response.¹⁹⁰

In August 2015, DOS, in partnership with the Paul G. Allen Family Foundation, received two isolation modules that could accommodate and transport up to four EVD patients each by air.¹⁹¹ Meanwhile, DoD maintained a transport isolation system capable of transporting DoD personnel exposed to EVD or other infectious diseases.¹⁹² With these tools in place, DoD was able to retrieve patients in Liberia approximately 72 hours after notification and transport them to medical treatment facilities.¹⁹³

As of September 27, 2015, international health officials reported 881 confirmed EVD infections among healthcare workers in Guinea, Liberia, and Sierra Leone, and 513 fatalities.¹⁹⁴

Medical evacuation services and dedicated treatment for health workers at the Monrovia Medical Unit provided responders with the confidence that a high level of care was available to them in the event that they contracted the disease. It also helped address barriers to the mobilization of international volunteers willing to participate in response efforts.¹⁹⁵ For these reasons, the early availability of medical evacuation services and dedicated treatment for international responders may assist in responses to future health crises abroad.¹⁹⁶ Capacity developed by the U.S. Government to provide for patient isolation while in transport could promote effective international responses to future infectious disease outbreaks.¹⁹⁷

Because deceased EVD victims can remain infectious for several days after death, the U.S. Government supported the establishment and operation of safe burial teams to reduce the spread of EVD.¹⁹⁸ In Guinea,

USAID partner International Federation of Red Cross and Red Crescent Societies (IFRC) continued to support 104 safe burial teams covering all EVD-affected prefectures in the country.¹⁹⁹ In Liberia, USAID worked through implementing partner Global Communities to support 38 burial teams that operated in all Liberian counties, down from 53 burial teams during the previous quarter.²⁰⁰ USAID partner IFRC also supported 55 active burial teams in Sierra Leone during the reporting period.²⁰¹

The EVD outbreak created stress and trauma for health workers, EVD survivors, and their families.²⁰² Psychosocial support for EVD-affected individuals included counseling, reintegration services, and establishing and staffing support centers.²⁰³ In Guinea, USAID supported implementing partners ChildFund, International Medical Corps, Save the Children, and the UN Children's Fund (UNICEF) in providing psychosocial support to EVD-affected communities.²⁰⁴ As of September 9, 2015, UNICEF had reportedly provided psychosocial support to approximately 114,300 children across the country.²⁰⁵

EVD SURVEILLANCE AND EPIDEMIOLOGY

The U.S. Government provided mobile laboratories and supported laboratory testing facilities in the region to increase diagnostic capacity and enhance EVD surveillance. By September 30, 2015, one U.S. Government-supported laboratory remained active in Guinea, three in Liberia, and two in Sierra Leone.²⁰⁶ DoD provided EVD diagnostic laboratory support in close coordination with CDC, and provided EVD surveillance training and laboratory support in Guinea, Liberia, and Sierra Leone.²⁰⁷ In addition, DoD's Cooperative Biological Engagement Program (CBEP) assisted the Guinean MOH in developing standard operating procedures for laboratory operations and EVD diagnostics.²⁰⁸ However,

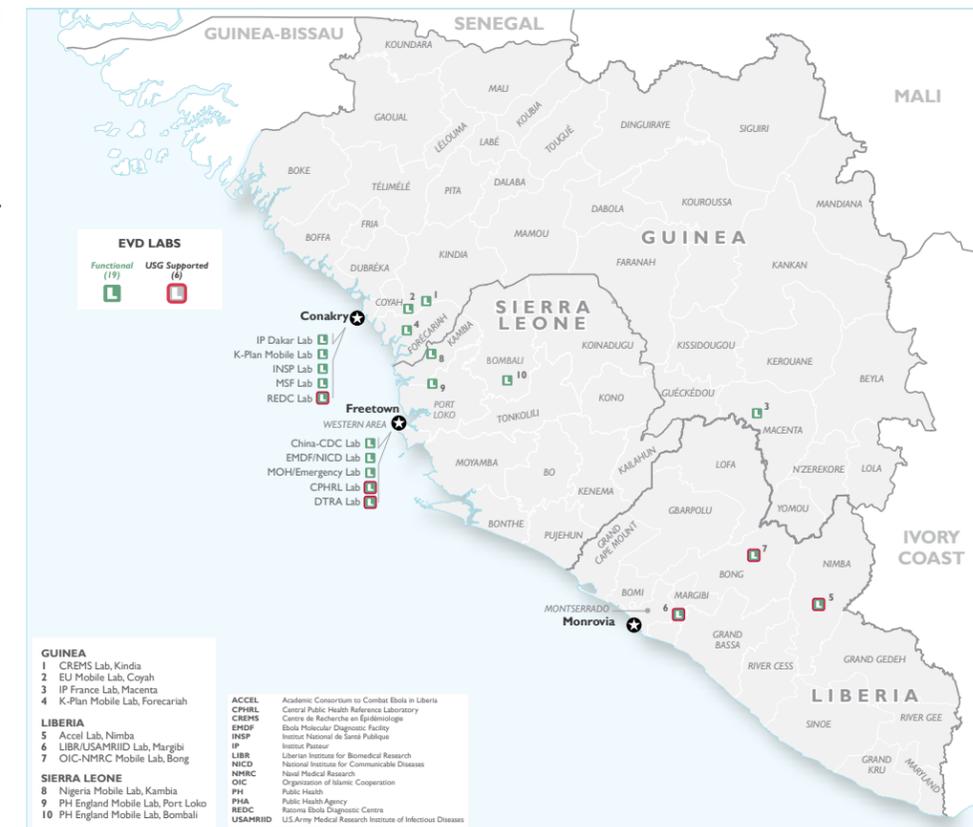


Figure 7: Location of U.S. Government-supported laboratories in Guinea, Liberia, and Sierra Leone, as of October 1, 2015 (source: WHO, 2015)

CBEP's efforts to transition its EVD diagnostic capabilities to host-country governments were delayed by the continued emergence of EVD cases during the quarter.²⁰⁹

The U.S. Government also supported the research and development of rapid diagnostic tools to quickly identify EVD. The Biomedical Advanced Research and Development Authority (BARDA), part of HHS's ASPR, supported OraSure Technologies as it developed a rapid diagnostic device for EVD detection, which FDA granted an Emergency Use Authorization in July 2015. CDC planned to test this rapid diagnostic tool in the United States and West Africa.²¹⁰ In September 2015, CDC and response partners trained safe burial teams and healthcare workers in Conakry and Forécariah prefectures on the use of EVD rapid diagnostic tests to test individuals with suspected EVD cases and all recently deceased individuals.²¹¹

Table 3: Selected Ebola diagnostic tools supported by U.S. Government agencies

Product	U.S. Agencies
Next Generation Diagnostics System Increment 1 FilmArray BioThreat-Ebola (BT-E) Assay By BioFire Defense	DoD Chemical and Biological Defense Program (CBDP), NIH/NIAID ²¹²
Rapid recombinant antigen immunoassay diagnostics By Corgenix	NIH/NIAID ²¹³
Xpert Ebola Assay By Cepheid	NIH/NIAID ²¹⁴
Ebola Zaire rRT-PCR (TaqMan®) By TaqMan	CBDP, U.S. Army Medical Research Institute of Infectious Diseases (USAMRIID) ²¹⁵
EZ1 Real-time RT-PCR Assay By DoD	DoD Joint Science and Technology Office (JSTO) ²¹⁶
OraQuick By OraSure Technologies	ASPR/BARDA, CDC ²¹⁷

Sources: DoD and HHS.

EVD VACCINES AND THERAPEUTIC CANDIDATES

No WHO- or FDA-approved vaccines or therapeutics were available for the prevention or treatment for EVD as of the end of the quarter.²¹⁸ To address this limitation, the U.S. Government supported the development of vaccines and therapies that may help control the disease and mitigate its first- and second-order effects on patients. During the reporting period, ASPR/BARDA supported the development of 12 medical countermeasures for Ebola while the DoD's Defense Advanced Research Projects Agency (DARPA) focused on identifying novel vaccine and antibody therapeutic candidates for Ebola.²¹⁹

The U.S. Government supported clinical trials to evaluate the safety and efficacy of several vaccine candidates in the United States and West Africa.²²⁰ ASPR/BARDA and CDC conducted clinical trials for NewLink Genetics/Merck's recombinant VSV-based vaccine candidate in Sierra Leone through the Sierra Leone Trial to Introduce a Vaccine against Ebola study, which had enrolled 8,680 participants by mid-August 2015 and vaccinated over 5,550 participants by mid-October 2015.²²¹ NIH/NIAID expanded safety and immune response studies on NewLink Genetics/Merck VSV-EBOV and GlaxoSmithKline cAd3-EBOV vaccine candidates in partnership with the Government of Liberia through the Partnership for Research on Ebola Virus in Liberia study (PREVAIL I).²²² The PREVAIL study enrolled 1,500 participants in Liberia and later expanded to include Guinea and Sierra Leone, as well.²²³ ASPR/BARDA sponsored clinical trials for a vaccine candidate from Janssen/Bavarian Nordic and another vaccine candidate from Profectus.²²⁴ Finally, DARPA supported Inovio's DNA-based vaccine candidate, INO-4212, which underwent clinical safety trials during the reporting period.²²⁵

U.S. Government agencies also supported the development of several therapeutic candidates. Whereas vaccines prevent EVD infection, therapeutics are designed to treat patients who have already contracted the disease.²²⁶ DoD's Defense Threat Reduction Agency (DTRA), NIH/NIAID, and ASPR/BARDA collaborated with Mapp Biopharmaceuticals to develop and manufacture ZMapp, a therapeutic drug produced from antibodies grown in tobacco plants.²²⁷ NIH/NIAID supported the development of ZMapp and DTRA sponsored non-clinical efficacy studies of ZMapp as a precursor to obtaining approvals for the drug to initiate clinical trials.²²⁸ ASPR/BARDA supported the manufacturing of ZMapp for safety and efficacy

clinical trial in the United States and in West Africa.²²⁹ During the reporting period, ASPR/BARDA also supported animal studies for two tobacco-based antibody candidates, nonhuman primate studies for two Chinese hamster ovary cell-based antibody candidates, and the initial development of one algae-based antibody candidate.²³⁰ DARPA evaluated 20 Ebola antibodies from U.S. and West African survivors and identified 1 antibody, cGMP, for scaled-up clinical manufacturing.²³¹ NIH/NIAID supported preclinical and clinical trials for BioCryst's antiviral drug candidate BCX4430 in the United States.²³²

Meanwhile, FDA worked with WHO and foreign public health regulatory authorities to ensure the safety and efficacy of EVD countermeasures deployed as part of the coordinated Ebola response.²³³ In August 2015, HHS and FDA representatives met in Liberia with regulators from the affected countries to understand their regulatory decision-making processes; discuss the latest assessments and next steps for vaccines, therapeutics, and diagnostics for Ebola; and provide information to West African regulators to make decisions about next steps for specific Ebola medical products. As a result of the meeting, the U.S. and Guinean Governments entered into an agreement to establish processes to overcome technological and communications challenges in the future.²³⁴

According to WHO, improvements to case investigation and contact tracing contributed to the reduction of case incidence in the three countries.²⁴³ Contact tracing allows the healthcare community to identify and isolate individuals at risk of contracting EVD due to their contact with an individual known to have the disease.²⁴⁴ The U.S. Government supported efforts to improve disease surveillance and contact tracing in high-risk areas; CDC established and increased EVD testing capabilities in all three countries and USAID's Global Development Lab leveraged technology tools to increase the accuracy and timeliness of contact tracing data.²⁴⁵

In Guinea, USAID supported six partners' contact tracing efforts, with IOM advancing EVD surveillance efforts along Guinea's border through the installation of health screening posts, the monitoring of population flows, and promotion of EVD awareness among travelers and border communities.²⁴⁶ IOM reported that, by late August 2015, it had reached nearly 37,600 people along the Guinea-Sierra Leone border over the previous month, as well as more than 61,100 people along the Guinea-Mali border.²⁴⁷ IOM and other USAID partners also continued EVD screening and surveillance efforts at all Sierra Leone points of entry and exit.²⁴⁸

Table 4: Selected Ebola medical countermeasures supported by U.S. Government agencies

Product	U.S. Agencies
Vaccines	
<i>cAd3-ZEBOV</i>	ASPR/BARDA, NIH/NIAID ²³⁵
<i>By GlaxoSmithKline and NIAID</i>	
<i>VSV-EBOV</i>	ASPR/BARDA, CDC, DoD JSTO, NIH/NIAID ²³⁶
<i>By NewLink Genetics and Merck Vaccines USA</i>	
<i>Ad26-EBOV and MVA-EBOV</i>	ASPR/BARDA, NIH/NIAID ²³⁷
<i>By Johnson & Johnson and Bavarian Nordic</i>	
<i>HPIV3/EboGP</i>	NIH/NIAID ²³⁸
<i>By NIAID</i>	
<i>Rabies-EBOV</i>	NIH/NIAID ²³⁹
<i>By NIAID and Thomas Jefferson University</i>	
<i>rVSVN4CT1 EBOV</i>	NIH/NIAID ²⁴⁰
<i>By Profectus</i>	
Therapeutic Treatments	
<i>ZMapp</i>	ASPR/BARDA, DoD JSTO, NIH/NIAID ²⁴¹
<i>By Mapp Biopharmaceuticals</i>	
<i>BCX-4430</i>	ASPR/BARDA, NIH/NIAID ²⁴²
<i>By Biocryst</i>	

Sources: DoD and HHS.

In Liberia, CDC and USAID partners re-trained contact tracers and supervised monitoring activities.²⁴⁹ USAID also funded a training program for county health teams on the national Integrated Disease Surveillance and Response system in Liberia, which included community event-based surveillance and guidance on sample collection.²⁵⁰ In all three countries, CDC supported programs to provide counseling and semen testing to help reduce the potential for sexual transmission of EVD.²⁵¹

RESTORATION OF ESSENTIAL HEALTH SERVICES

The U.S. Government distributed essential medical supplies to healthcare facilities and trained healthcare workers on infection prevention and control (IPC) techniques to restore the safety and functionality of basic

health services. In Guinea, USAID partners Women and Health Alliance International, Catholic Relief Services (CRS), and Premiere Urgence trained healthcare personnel in IPC and supported the rehabilitation of water, sanitation, and hygiene infrastructure at health facilities.²⁵² CRS reported that it had trained nearly 4,000 healthcare workers on IPC and worked to strengthen IPC practices at private clinics and other sites, while USAID partner Jhpiego reported that it trained more than 3,750 healthcare workers on IPC by the end of the reporting period.²⁵³

U.S. Government efforts to restore essential health services in Liberia included supporting the Government of Liberia's Safe and Quality Services training program for all healthcare workers through ten implementing partners and strengthening IPC measures in non-EVD healthcare facilities.²⁵⁴ Meanwhile, USAID partner MENTOR Initiative reported that it conducted IPC supervision at approximately 300 medical stores and 100 healthcare facilities in Montserrado County, Liberia.²⁵⁵

In Sierra Leone, USAID supported the Ebola Response Consortium, led by USAID partner International Rescue Committee, in strengthening IPC in 19 government hospitals and more than 1,100 health units countrywide.²⁵⁶ In September 2015, CDC and WHO reported strong adherence to IPC protocols during a field assessment of 104 health units under the supervision of Ebola Response Consortium-member GOAL in Bombali District.²⁵⁷

SOCIAL MOBILIZATION AND COMMUNICATIONS

Effective community engagement can increase the likelihood that at-risk individuals seek proper medical care and isolation. This engagement also has the potential to improve communities' cooperation with contact tracing efforts, increase the application of safe burial practices, and promote the adoption of EVD prevention practices. The U.S. Government has supported communication and community outreach efforts to raise public awareness of Ebola symptoms, modes of transmission, and effective prevention practices.²⁵⁸

In Guinea, 14 USAID-supported partners engaged in community outreach and social mobilization activities, with USAID partner IFRC reportedly reaching more than 1.8 million people since March 2014; UNICEF reaching approximately 84,700 households in early September 2015; and Democratic Republic of Congo Emergency Services initiating activities in lower Guinea during the quarter.²⁵⁹ In Liberia, USAID initiated the next phase of the Ebola Community Action Platform, its flagship social mobilization program; and USAID partner Mercy Corps worked with local entities to build preparedness against disease outbreaks at the grassroots level.²⁶⁰ With USAID's support, UNICEF reached nearly 629,400 households in Liberia by the end of the reporting period.²⁶¹ Meanwhile, in Sierra Leone, the U.S. Government funded eight partners in their community outreach activities.²⁶² This included intensified social mobilization activities by USAID partner UNICEF in Port Loko, Kambia, and Western Area to support the country's surge response to break ongoing EVD transmission chains.²⁶³

INITIAL PHASE OF THE U.S. GOVERNMENT'S RESPONSE TO THE OUTBREAK

The international community's slow response to the EVD outbreak in West Africa has been the subject of criticism by NGOs, health officials, and media representatives. An independent panel commissioned by WHO concluded that authorities in the affected countries, WHO, and the broader global community "were all 'behind the curve' of the rapid spread of the Ebola virus."²⁶⁴ According to the CDC Director and the former CDC Incident Manager for the Ebola Response, the disease would have been associated with far fewer EVD cases and deaths and the negative socio-economic effects would have been reduced had response efforts been implemented earlier, faster, and more

July 10

The U.S. Government pledges \$266M at UN-hosted conference to assist Guinea, Liberia, and Sierra Leone with recovery efforts.

July 26

Interim results indicate that an Ebola vaccine, delivered through a ring vaccination strategy, may be effective against the disease.

July 31

UNMEER closes. WHO assumes lead for the UN's EVD response.

September 3

WHO declares the end of the EVD outbreak in Liberia for the second time.

September 21

CDC discontinues enhanced entry screening for travelers arriving in the United States from Liberia.

September 28

Start of the first week with zero confirmed EVD cases in West Africa since March 2014.

effectively.²⁶⁵ Researchers have estimated, for example, that 12,500 EVD cases could have been averted in Sierra Leone if treatment beds had been introduced a month earlier.²⁶⁶

U.S. Government biosurveillance programs were monitoring the disease and its spread to other countries as early as March 2014, but this information and warnings of the impending EVD epidemic did not trigger a robust early U.S. response.²⁶⁷ Internal assessments by U.S. Government agencies involved in international Ebola response efforts noted that both international authorities' recognition of the magnitude of the outbreak and their engagement in response efforts should have occurred earlier.²⁶⁸ Initial reported resistance by the WHO country office and the WHO Regional Office for Africa to involve CDC and other organizations also contributed to delays in the early response to the outbreak.²⁶⁹ According to an internal USAID assessment, the National Security Council tasked OFDA to lead the whole-of-government response in August 2014, after the EVD outbreak had already become an acute emergency.²⁷⁰

The U.S. Government decided to concentrate its response efforts on Liberia, the country most severely affected by the outbreak in August and September 2014 when it was reporting 300 to 400 new EVD cases per week. Other humanitarian actors were expected to take the lead in Guinea and Sierra Leone.²⁷¹ The U.S. Government's approach to EVD response also focused to a large extent on treating EVD patients by increasing the number of ETU beds.²⁷²

According to an internal USAID assessment, the U.S. Government's heavy focus on Liberia resulted in the Guinea and Sierra Leone country teams becoming a secondary focus despite the need for assistance in those countries.²⁷³ By the time the international community, including the U.S. Government, began deploying resources into Liberia in September 2014, new EVD cases and fatalities were already declining.²⁷⁴ Meanwhile, in Guinea and Sierra Leone, the size of the EVD outbreak surpassed the capacity of the other lead responders.²⁷⁵ OFDA had to scale up its support in those countries to address these capacity gaps.²⁷⁶

ETUs took time to establish and many ETUs were not completed by the time the outbreak peaked.²⁷⁷ Until new ETUs were constructed and ready for patients in Liberia, CDC and USAID worked to halt the transmission of the disease by engaging with communities to isolate sick individuals and bury the deceased safely.²⁷⁸ As the outbreak progressed, OFDA assessed that prevention measures, behavioral change, and social mobilization were successful interventions in

reducing the number of EVD cases.²⁷⁹ While initial plans called for the U.S. Government to aid in the establishment of 27 ETUs in Liberia, 12 of which were to be constructed by DoD, the reduction of EVD cases in the country reduced the need for this number of units.²⁸⁰ Media reports have observed that many ETUs in Liberia were only completed when the epidemic had subsided and that the units treated few patients as a result.²⁸¹

USAID's internal assessment also noted that the programming push and tactical decision-making in the U.S. Government's response effort frequently originated in Washington, D.C., and were not always based on needs identified in the field.²⁸² The assessment recommended empowering field teams to lead strategy development and inform tactics in support of the identified response strategy.²⁸³

Despite response delays, WHO has concluded that generous international financial, logistical, and human resources support in Liberia prevented many EVD cases and deaths in the ensuing months, controlled the spread of the disease, and changed the evolution of the EVD outbreak.²⁸⁴

TRANSITION FROM RESPONSE TO RECOVERY

Controlling the EVD outbreak and maintaining zero EVD cases remained priorities for the U.S. Government, but as the number of new EVD cases decreased during the quarter, the U.S. Government began to focus on recovery and long-term sustainability of health and economic development programs.²⁸⁵ During the reporting period, the U.S. Government worked with national authorities in Guinea, Liberia, and Sierra Leone, as well as other international partners, to align transition plans and activities.²⁸⁶

USAID and other U.S. Government agencies plan to work further with national authorities and development partners to institutionalize command and control structures needed to respond to EVD and other disease outbreaks, support and promote national and local ownership of EVD response activities, and develop longer-term disease surveillance, health promotion, and national response programs.²⁸⁷ As part of this transition process, U.S. Government agencies expect to work with WHO and national authorities to ensure that treatment services remain available and to maintain support for epidemiological activities until the outbreak is declared over.²⁸⁸

PILLAR II: ADDRESSING SECOND-ORDER EFFECTS

The 2014-2015 EVD outbreak in West Africa had significant secondary effects on the region. It overwhelmed public institutions and constrained local and national economic activity. Thousands were left unemployed and without access to basic goods or services.²⁸⁹ To address the outbreak's secondary impacts and return stability to the region, the U.S. Government focused on four areas of activity under Pillar II of the strategy for EVD response and recovery:

- Food security
- Health systems recovery and critical and non-Ebola health services²⁹⁰
- Governance and economic crisis mitigation
- Innovation, technology, and partnership²⁹¹

USAID, in collaboration with other agencies, such as CDC and USPHS, worked to advance Pillar II objectives. Within USAID, the Africa Ebola Unit (AEU) is responsible for coordinating this effort across a number of USAID operating units, including: the Bureau for Africa; the Bureau for Democracy Conflict and Humanitarian Assistance and its Office of Food for Peace (FFP); Bureau for Food Security (BFS); Bureau for Global Health; the U.S. Global



A young orphan waits for a USAID food distribution truck to arrive. His school served as a distribution point for food aid, though it was closed for 6 months during the outbreak. (Photo by Adam Parr for USAID, Margibi, Liberia, January 31, 2015)

Development Lab; and the Liberia and Guinea/Sierra Leone missions.²⁹²

FOOD SECURITY

The EVD outbreak in West Africa adversely affected food security in Guinea, Liberia, and Sierra Leone. Efforts to mitigate the EVD outbreak and a general fear of contracting the virus led governments and communities to restrict gatherings and impose travel restrictions and quarantines. These actions resulted in market and border closures, job loss, restricted trade, and below-average agricultural production. As a result, food prices rose, household purchasing power diminished, and the region suffered a general economic downturn.²⁹³ Despite the dramatic decline in new EVD cases and improvements in markets across the region during the second half of 2015, lingering impacts from the EVD outbreak combined with other localized issues, such as prolonged lean seasons, have contributed to continued food insecurity in Guinea, Liberia, and Sierra Leone.²⁹⁴

Lean season is the period of time between harvests when food supplies from the previous harvest have been exhausted and the next harvest has not begun.

USAID FAMINE EARLY WARNING SYSTEM NETWORK

The USAID-funded Famine Early Warning Systems Network (FEWS NET) categorizes food insecurity using an integrated phase classification system. Under this framework, when at least 1 in 5 households face reduced, minimally adequate food consumption without resorting to unsustainable coping strategies, but feeding themselves requires the sacrifice of some essential non-food expenditures, conditions are “stressed.” “Crisis” conditions are in effect when least 1 in 5 households face significant food consumption gaps with high or above normal acute malnutrition, or are marginally able to meet minimum food needs through unsustainable coping strategies such as liquidating livelihood assets.²⁹⁵

According to FEWS NET, food security conditions in Liberia were “stressed” during the reporting quarter due to a prolonged lean season and weak household purchasing power associated with economic decline during the outbreak.²⁹⁶ Food security conditions in Guinea also remained “stressed” during this period. Interventions by the Government of Guinea and its partners—such as free food distributions, moderately priced food sales, and cash-for-work programs—did not fully offset the residual economic effects of the EVD outbreak, which kept household purchasing power down.²⁹⁷ In Sierra Leone, “crisis” food security conditions observed in the third quarter continued through the fourth quarter. Sustained weak household purchasing power and a prolonged lean season

also contributed to tenuous food security conditions.²⁹⁸ However, in September 2015, food security began to slowly improve due to the early harvest of certain crops, such as sweet potatoes and rice.²⁹⁹

While conditions remained at stressed or crisis levels across the three countries at the end of this reporting period, FEWS NET projects improved food security across all three countries in anticipation of the main rice harvests.³⁰⁰ Projected improvements in market function and above-average harvests across the region are expected to reduce food insecurity during the next quarter.³⁰¹

U.S. Government efforts to promote food security in the region are managed by USAID's FFP and BFS. During the reporting period, USAID's efforts concentrated on increasing access to food among vulnerable groups directly and indirectly affected by EVD, and increasing local food production and restoring market function.³⁰²

Ebola-related FFP programs are designed to "restore pre-crisis food consumption levels, livelihoods, and productive assets by stimulating the local production and marketing of staple foods."³⁰³ To advance these aims, FFP worked with nongovernmental organizations as well as UN agencies.³⁰⁴

During the reporting period, FFP partners worked to improve food security conditions among those affected by the outbreak in Liberia and Sierra Leone by restoring household access to food through targeted cash transfers, and cash-for-work opportunities.³⁰⁵ FFP programs also provided agricultural input vouchers to help farming families restart agricultural production, and gave limited cash grants to small-scale traders to help them resume trading at the local market level.³⁰⁶ By these means, FFP reportedly provided assistance to 920,000 people across seven counties in Liberia, and to 350,000 people in Sierra Leone. This represented an increase of 40,000 and 200,000 beneficiaries, respectively, over the previous quarter.³⁰⁷ Additionally, FFP extended funding to Save the Children in Liberia and CRS and World Vision in Sierra Leone to initiate activities to address acute food insecurity.³⁰⁸

In Guinea, FFP continued to support two food assistance programs initiated last quarter. USAID supported CRS deliveries of food vouchers to 10,000 beneficiaries and the UN World Food Programme's (WFP's) local purchase of food for the national school feeding program, which reportedly provided daily meals to approximately 120,000 children.³⁰⁹

FFP activities also support vulnerable children in Guinea, Liberia, and Sierra Leone. FFP-supported emergency school feeding programs in Liberia and Guinea helped meet household food needs by providing

children with daily hot meals while providing an incentive for parents to send their children back to reopened schools.³¹⁰ FFP is also supporting some of the most vulnerable children in Guinea, Liberia, and Sierra Leone through UNICEF, which is restarting screening and treatment services for children with severe acute malnutrition using ready-to-use therapeutic foods provided in-kind by USAID.³¹¹ This U.S.-sourced ready-to-use therapeutic foods will assist approximately 51,200 children under the age of 5 with or at risk of severe acute malnutrition.³¹²

In collaboration with 10 other U.S. Government agencies, USAID's BFS leads the coordination and implementation of Feed the Future, which is the U.S. Government's global hunger and food security initiative for working with partner countries to develop and improve their agricultural sectors.³¹³ BFS worked to identify opportunities for public-private partnerships to rejuvenate agricultural sectors and livelihoods affected by the Ebola outbreak in West Africa. Through the Ebola Recovery Partnership Global Development Alliance, USAID expects to provide at least \$1 million in general development assistance toward two or more public- and private-sector partnerships in areas such as employment and entrepreneurial training, access to new agricultural technologies, and financing.³¹⁴

During the reporting period, USAID supported agricultural recovery efforts in Guinea, Liberia, and Sierra Leone through the West Africa Seed Program, an effort to increase the availability of high-quality, certified seeds in the affected countries.³¹⁵

In Liberia, which had been selected as a Feed the Future focus country prior to the outbreak, USAID is implementing the Food and Enterprise Development project. This project works through value chains to improve production, processing, transport, and marketing of rice, cassava (an edible root-vegetable), vegetables, and livestock such as goats.³¹⁶ In addition, USAID plans to contribute to the Feeder Roads Alternative and Maintenance Program, which is intended to rehabilitate 450 kilometers of farm-to-market roads and work with the Government of Liberia to establish a roads maintenance program.³¹⁷

Also during the reporting period, BFS supported food and agricultural systems assessments in Guinea and Sierra Leone.³¹⁸ In Guinea, BFS supported the University of California Davis Horticulture Lab in conducting a horticulture viability assessment, the findings of which were released in preliminary form during the reporting period.³¹⁹ In Sierra Leone, BFS continued to support an agriculture assessment and pilot program with World Fish that focused on improving rice and fish aquaculture.³²⁰ In coordination with USAID staff in Guinea and Sierra Leone, BFS also

supported the Leveraging Economic Opportunity team, which conducted assessments to identify value chains with the greatest economic and nutritional potential.³²¹ The Leveraging Economic Opportunity team also submitted preliminary findings during the reporting period. Additionally, during the quarter, the BFS funding Strengthening Partnerships, Results, and Innovations in Nutrition Globally project began nutrition assessments in Guinea and Sierra Leone.³²² The assessments are intended to provide insight into current conditions and provide the basis for plans to integrate nutrition efforts into other assistance activities, such as maternal and child health and agricultural assistance.³²³

FOOD SECURITY CHALLENGES

According to USAID, hindrances to initial food security assistance efforts included data limitations and a lack of familiarity with local food security partners in some areas.³²⁴ Uncertainty about the effects of the outbreak on food security, particularly as it applied to individuals who did not contract the disease, complicated efforts to design activities to assist communities in need.³²⁵ FFP indicated that the number of international partners able to address the food security-related impacts of Ebola was limited in Guinea.³²⁶ This reportedly posed challenges in determining how to best assist populations in need of food assistance.³²⁷ To overcome these challenges, USAID conducted assessments and monitored markets in coordination with partners like WFP and FEWS NET. With this information, USAID was able to refine assistance plans and identify methods most likely to effectively increase access to food (i.e., cash rather than in-kind food aid).³²⁸

HEALTH SYSTEMS RECOVERY AND CRITICAL NON-EBOLA HEALTH SERVICES

At the height of the EVD outbreak, national and local healthcare systems in Guinea, Liberia, and Sierra Leone were overwhelmed by the scope and scale of the epidemic. Healthcare facilities lacked sufficient supplies, such as beds and medicine, and required more qualified healthcare workers.³²⁹ Many healthcare workers contracted EVD or reportedly refused to work due to safety concerns or pay problems, leaving health facilities unable to care for EVD patients or provide conventional care for health matters unrelated to EVD.³³⁰ Basic medical services such as infant delivery, maternal care, and the treatment of common diseases like malaria were diminished.³³¹ Moreover, fear of contracting EVD at medical facilities reportedly prompted some individuals to avoid medical attention for common ailments, treatments, and preventative care, including vaccinations.³³²

During the reporting period, USAID worked to improve the management and delivery of non-Ebola healthcare services and address social issues that hindered response efforts.³³³

A number of USAID efforts focused on improving the operation of healthcare institutions in the wake of the outbreak. The USAID-funded Maternal and Child Survival Program completed baseline assessments of 61 health facilities in Liberia to identify gaps and help inform future work to improve healthcare systems and facilities. The assessments highlighted needs in the areas of staffing and capacity, supplies and medicines, water, sanitation, and hygiene practices, and procedures to promote compliance with IPC standards.³³⁴



A mother and child washing hands with chlorine in Guinea. (Photo courtesy of UN/Martine Perret, January 14, 2015)

USAID has targeted health systems administration as a key area of focus within its larger effort to restore healthcare systems. To achieve this, USAID provided technical assistance to the ministries of health in Guinea, Liberia, and Sierra Leone in several areas, including governance, management, healthcare financing, and oversight. In particular, assisting ministries of health in instituting EVD-related healthcare protocols such as proper IPC was a top priority across the three countries.³³⁵

In Guinea, USAID finalized plans for implementing partner Jhpiego to start a program to strengthen maternal and child healthcare management and service delivery at the district level.³³⁶ USAID also completed plans to increase the Guinean MOH's effective use of healthcare information systems to enable it to manage routine healthcare services through the MEASURE Evaluation project.³³⁷

USAID has also sought to improve supply chain management.³³⁸ In particular, USAID has focused on improving the efficiency of supply chain management by strengthening supply demand forecasting and moving commodities from warehouses to field locations.³³⁹ In Guinea, USAID completed initial assessments at 112 facilities where USAID plans to support the consistent availability of IPC supplies and materials, and provide technical assistance to prefectures to manage supply chains and avoid supply shortages.³⁴⁰ USAID also supported efforts to improve supply chain management through UNICEF in Liberia, where UNICEF completed vaccine management assessments and a review of the national immunization program.³⁴¹ This review will guide efforts to monitor and evaluate vaccine supply chains and assist the country in improving its supply chain operations.³⁴² Meanwhile, in Sierra Leone, USAID worked with UNICEF to create a finalized list of essential medications and commodities for the national government.³⁴³ USAID worked with other donors to build the capacity of the National Pharmaceutical Procurement Unit in Sierra Leone by supporting the procurement of life-saving commodities for the Government of Sierra Leone's healthcare program.³⁴⁴

To complement institutional improvements, USAID has focused on improving healthcare worker capacity through training. USAID supported the reintegration of Ebola healthcare workers into national healthcare systems, and USAID implementing partners provided supervision at health facilities to ensure healthcare workers maintained IPC standards instituted during the outbreak.³⁴⁵ USAID also funded training for new community healthcare workers in Sierra Leone.³⁴⁶

Another component of USAID's effort to spur the recovery of health systems in Guinea, Liberia, and Sierra Leone is to revive demand for healthcare services by building trust and increasing community

confidence in healthcare facilities and workers.³⁴⁷ Implementing partners plan to transition EVD awareness work to social and behavior change communication (SBCC) efforts to increase confidence in healthcare systems. In Sierra Leone, USAID sought to improve the quality, focus, and scale of SBCC activities to alter behaviors and reduce fear of health facilities at the community level.³⁴⁸ USAID completed related assessments and SBCC programs that promote healthy behaviors and encourage individuals to seek maternal, neonatal, and child care services began operating in Sierra Leone during the reporting period.³⁴⁹ USAID also instituted SBCC programs to increase demand for health services in Guinea. Program activities included publishing guidelines for healthcare workers, and promoting community mobilization through signs, stickers, posters, billboards, and radio and television programs.³⁵⁰

GOVERNANCE AND ECONOMIC CRISIS MITIGATION

During the Ebola epidemic, governments in Guinea, Liberia, and Sierra Leone struggled to provide traditional public services while responding to the outbreak. Government services such as public education ceased and major segments of the economy came to a standstill.³⁵¹ In an effort to prevent the spread of EVD, hubs of economic activity like markets and border crossings were closed.³⁵² Projected GDP growth rates declined by 3.4 to 5.2 percent across the three countries in 2014.³⁵³

To address these second-order impacts of the EVD outbreak, USAID funded activities to strengthen host governments' ability to deliver services and encourage private sector investment in local economies.³⁵⁴

Through host governments, USAID targeted several areas for assistance, including improving water and sanitation access for EVD-affected communities, ensuring school safety, and implementing social protection for vulnerable communities.³⁵⁵

USAID also began initial efforts improve governance and democratic processes in Guinea, Liberia, and Sierra Leone. In Guinea and Liberia, programs focused on improving accountability, strengthening coordination among community leaders, reintegrating EVD survivors into society, and strengthening political processes.³⁵⁶



Religious leaders and community leaders from Boffa, Guinea meet with UN Representatives. (Photo courtesy of Simon Ruf and UNMEER, February 26, 2015)

In Sierra Leone, governance efforts were still in initial design phases during the reporting period.³⁵⁷

To improve governance in Liberia, USAID worked to promote public service accountability, strengthen civil society, and reduce EVD survivor stigmatization through continued support of the Civil Society and Media Ebola Accountability program.³⁵⁸ This program is designed to bolster the ability of Liberian civil society and media to hold government and responders accountable for their EVD response and recovery activities and their use of Ebola-related funding.³⁵⁹ During the quarter, the program took steps to increase unity among community leaders, reduce EVD survivor stigmatization, and galvanize citizens to prevent misuse of Ebola funds at the local level.³⁶⁰ Through the program, USAID supported the Liberia Media for Democratic Initiatives radio show that facilitates exchanges between civilians and county and city officials about the effects of EVD on the community.³⁶¹ The Civil Society and Media Ebola Accountability program also extended support to the Liberia Media Center, which produced radio programs addressing EVD survivors.³⁶² Titled the “Situation Room,” the program featured a panel of EVD survivors and groups providing for their care to discuss their experiences concerning EVD survivor welfare, reintegration, and livelihoods in post-EVD Liberia.³⁶³

In Guinea, USAID has sought to facilitate peaceful political dialogue, consensus building, and credible elections as violence erupted in the period leading up to the October 11, 2015, presidential elections. USAID supported programs with the Consortium for Elections and Political Process Strengthening and the NGO Search for Common Ground (SFCG) to reduce violence and promote peaceful political processes.³⁶⁴ These programs were designed to promote dialogue and consensus building, strengthen political party systems, expand civic and voter education, enhance citizen engagement and oversight of elections, and provide election commission support.³⁶⁵ During the reporting period, the Consortium for Elections and Political Process Strengthening trained 284 master trainers who were responsible for training political observers and party delegates to enhance electoral oversight.³⁶⁶ Meanwhile, SFCG produced public service announcements that aired on Guinean TV and radio stations encouraging peaceful discourse and increasing knowledge of election processes.³⁶⁷ SFCG also facilitated the development and signature of a Code of Good Conduct by journalists to promote ethics and credible reporting.³⁶⁸

USAID also reported support for two efforts to promote private sector investment in the region during the reporting period. In September 2015, USAID and DOS participated in the U.S. Liberia Trade and Investment Forum in New York City. The forum was designed to raise awareness

about opportunities for the U.S. private sector to partner with the Liberian private sector, the Government of Liberia, and the U.S. Government to support Ebola recovery efforts.³⁶⁹ USAID used the forum to identify prospective partners for its Ebola Recovery and Resilience Global Development Alliance, which includes plans for up to \$10 million to support 8 to 20 partnerships in numerous areas, including strengthening local health systems, improving basic education, and advancing global health security.³⁷⁰ Private sector and Government of Liberia representatives attended the event. USAID reported reaching more than 1,000 potential partners interested in facilitating EVD recovery efforts.³⁷¹

USAID also continued to promote economic activity in the region through the West Africa Trade Hub program, which implements activities to encourage trade and economic growth in West Africa. Initiated prior to the EVD outbreak, the program works with export-ready companies to expand trade relationships and markets in non-traditional sectors such as apparel and specialty foods.³⁷²

INNOVATION, TECHNOLOGY, AND PARTNERSHIPS

During the 2014-15 EVD outbreak, response efforts were hampered by communications and technology weaknesses in Guinea, Liberia, and Sierra Leone.³⁷³ Available systems did not have the capacity to transfer information at the speeds needed for rapid response to outbreak-related developments, leaving healthcare workers dependent on paper reporting, which took many days or weeks to transport.³⁷⁴ Limitations in the reliability of payment systems resulted in salary interruptions for healthcare workers and delays in response efforts.³⁷⁵

In response to challenges in these areas, USAID worked to advance the development of communications and data management tools through partnerships with host governments, civil society, and the private sector.³⁷⁶ USAID provided support to strengthen health information, communication, and digital financial systems in West Africa through technical assistance to ministries of health and partnerships with technology firms.³⁷⁷ USAID also helped coordinate government and donor investments in health information systems to improve interoperability.³⁷⁸

According to USAID, a critical challenge in managing health information systems and collecting and sharing health information data has been the lack of MOH capacity to support such systems.³⁷⁹ To increase MOH capacity in this area, USAID collaborated with CDC, WHO, and other partners to deploy technical advisors to each ministry during the reporting period.³⁸⁰ These advisors worked to map existing health information systems and identify areas for improvement, develop a strategy for

improving the systems, and build capacity within each of the three countries' ministries of health to manage their systems.³⁸¹ This effort is intended to help partners and donors coordinate health information system-related activities.³⁸²

Much of USAID's technical assistance in this area occurred under the MEASURE Evaluation program. The program assisted Liberia's MOH in strategic and operational planning to use health information systems to more effectively manage routine healthcare services and perform disease surveillance functions.³⁸³ In line with these aims, the MEASURE Evaluation program hosted a national health information systems strategy planning workshop in late September 2015 in collaboration with Liberia's MOH.³⁸⁴ The workshop aided participants in establishing operational plans, mapped donor activities, identified gaps in support, and developed a multi-partner strategy for future work.³⁸⁵

In addition to working with implementers to provide direct technical assistance, USAID issued solicitations for public and private sector collaboration and began developing partnerships with technology firms and other entities to strengthen health information systems and communication infrastructure in West Africa. In early September 2015, USAID issued a broad agency announcement to identify solutions to interoperability problems in health information systems in West Africa.³⁸⁶ The focus of this effort is to facilitate interoperability among health information systems to improve the quality, timeliness, and usefulness of information for health system management.³⁸⁷

USAID also took initial steps to promote potential partnerships with technology companies aimed at expanding internet and telecommunications connectivity in West Africa.³⁸⁸ USAID aims to link Liberian healthcare facilities to healthcare specialists outside of Liberia for expert diagnostic consultation, as well as to enable the use of mobile diagnostic tools and health information systems.³⁸⁹ USAID also plans to employ such partnerships to cultivate private sector investments in Liberia's communications infrastructure that were stalled or abandoned due to the EVD outbreak.³⁹⁰ In each case, these plans are being designed in coordination with the Government of Liberia and Liberian private sector entities.³⁹¹

By the end of the reporting period, USAID was also providing assistance to 14 innovations in six areas under the Fighting Ebola Grand Challenge.³⁹² These included innovations to promote healthcare worker safety, provide healthcare workers with new tools, advance health information technology, reinforce behavioral changes, establish rapidly deployable ETUs, and deliver cooling solutions.³⁹³ During the reporting

period, the Johns Hopkins University Grand Challenge team signed a licensing agreement with Dupont for its redesigned protective suit which is expected to be available in the first half of 2016.³⁹⁴ Additionally, USAID worked to pair the CommCare platform developed under the Grand Challenge with organizations in Guinea and Sierra Leone to assist in their contact tracing efforts.³⁹⁵ Meanwhile, the Government of Liberia planned to invest budget resources to expand its use of mHero, a mobile platform for two-way communication between health managers and healthcare workers.³⁹⁶ During the reporting period, designs were also completed on three types of decontamination chambers that were expected to be deployed to Liberia.³⁹⁷

USAID also worked to advance other technologies to strengthen healthcare information management outside the Grand Challenge framework. In Guinea, USAID began work to deploy open-source health information system software.³⁹⁸ This software provides the basis for digital data collection, transmission, and analysis at the local and national level and is intended to enable assessment of how Guinea's health systems are recovering from second-order effects of EVD.³⁹⁹ The software has already been adopted by Liberia and Sierra Leone, as well as nine other members of the Economic Community of West African States.⁴⁰⁰ SMS-based mentoring for healthcare workers, known as mMentoring, served as a critical tool for projects. USAID-supported NGO Jhpiego used the mMentoring tool in Liberia, for example, to help healthcare workers it had recently trained transition into active healthcare roles during the reporting period.⁴⁰¹ The platform enabled trainers to set up automated SMS messages that provided reminders and reinforced important practices, such as those related to IPC standards.⁴⁰²

PILLAR III: BUILDING COHERENT LEADERSHIP AND OPERATIONS

The intensity of the EVD outbreak in Guinea, Liberia, and Sierra Leone exceeded local response capacity and overwhelmed governments and health systems.⁴⁰³ In the effort to halt the spread of the disease and bolster response and recovery efforts, the international community mobilized significant numbers of personnel.⁴⁰⁴ The U.S. Government played a significant role in the international community's response, as multiple agencies deployed staff to assist with local and international response and recovery efforts.⁴⁰⁵ For more information on the Federal agencies and offices supporting the U.S. Government's Ebola response, see Appendix C.

Pillar III of the U.S. Government's Ebola response and preparedness strategy focuses on building coherent leadership and operations across

SMS, or short message service, is a character-limited text messaging service used in mobile communication systems.



Members of the USAID DART in Liberia. (Photo courtesy of USAID, April 9, 2015)

the response effort.⁴⁰⁶ These activities are intended to promote effective U.S. Government response and preparedness coordination, leadership, and operations by increasing staff levels across multiple organizations involved in the response.⁴⁰⁷

STAFFING

Under OUA, DoD deployed thousands of personnel to Liberia. After OUA concluded in June 2015, DoD continued to support EVD response efforts through DTRA and the U.S. Army Medical Research Institute for Infectious Diseases. By the end of September 2015, DoD reported that five DTRA contractors remained in Guinea in addition to two military personnel on detail from U.S. Army Medical Research Institute for Infectious Diseases.⁴⁰⁸

DOS personnel from multiple bureaus assisted in EVD response and recovery efforts. In total, 48 DOS personnel were reportedly engaged in EVD response efforts after March 2014. DOS did not have anyone formally assigned to the Ebola response as of September 30, 2015, but

personnel have duties related to Ebola, both domestically and in overseas posts.⁴⁰⁹

At the end of the reporting period, USAID reported that a total of 249 staff were still participating in EVD response and recovery efforts. Of these 249, 80 were based in Washington, D.C., while the remaining personnel were based in West Africa.⁴¹⁰ USAID missions in Liberia and Guinea had 88 and 59 personnel, respectively, and 7 staff assigned to the mission in Guinea operated out of Freetown, Sierra Leone.⁴¹¹

To meet response requirements, USAID depended on several different personnel types. Of the 249 USAID personnel engaged in EVD-related efforts at the end of the reporting period, U.S. direct hires and Foreign Service Nationals represented the largest group, with 71 and 51, respectively, contributing to EVD activities.⁴¹² The remaining USAID personnel involved in EVD-related work included staff on personal service contracts, participating agency service agreements, and resource support services agreements, as well as Third-Country Nationals, institutional contractors, and staff retained under other personnel arrangements.⁴¹³

As the number of active EVD cases in Guinea, Liberia, and Sierra Leone declined, USAID made adjustments to the number and assignments of personnel in the agency's EVD response and recovery efforts.⁴¹⁴ USAID hired temporary staff across the agency and in the field to work specifically on EVD efforts and relieved other personnel who were provisionally assigned to EVD efforts from other offices and bureaus.⁴¹⁵ This occurred primarily within AEU. Also, during the reporting period, OFDA reduced the size of the DART and Response Management Team (RMT) to reflect the declining intensity of the crisis in West Africa.⁴¹⁶ As of September 30, 2015, OFDA maintained a staff of 30 personnel working on EVD efforts, down from 45 at the end of the previous quarter.⁴¹⁷

HHS components have dedicated a significant number of personnel to EVD-related efforts. As of September 30, 2015, CDC reported that 520 personnel were regularly participating in EVD response efforts.⁴¹⁸ While many of them were based at CDC headquarters in Atlanta, Georgia, and quarantine stations at U.S. ports of entry, a substantial number were also active in West Africa. CDC reported that it had 50 staff in Guinea, 19 in Liberia, and 81 in Sierra Leone at the end of the quarter.⁴¹⁹ As of September 30, 2015, FDA reported that 20 personnel were substantially engaged in Ebola response, recovery, and preparedness efforts.⁴²⁰

Several federal agencies have used funds appropriated for Ebola response and preparedness to add more personnel. CDC planned to use these resources to support 306 full-time equivalent positions, while FDA

and USAID had more modest plans to support 35.5 and 37 temporary full-time equivalent positions, respectively.⁴²¹ CDC reported that it had made the most progress in identifying personnel to fill these positions, with 83 percent onboard as of September 30, 2015.⁴²² FDA and USAID had not made as much progress in this regard, with only 56 and 41 percent, respectively, of these planned personnel onboard at the end of the quarter.⁴²³

PERSONNEL CHALLENGES

The U.S. Government reportedly faced challenges staffing response efforts. During the initial phase of response efforts, DoD reported that it lacked adequate personnel with EVD clinical management training necessary to mount a large scale response or provide medical support to the civilian-led response, while USAID indicated that it had difficulties identifying and recruiting personnel who met response needs.⁴²⁴ According to an internal USAID after action assessment, for example, more medical and public health professionals familiar with EVD were needed than were immediately available to support response efforts at the beginning of the outbreak.⁴²⁵ CDC noted that French language proficiency requirements in some areas made it difficult to staff response efforts as quickly and consistently as it would have liked.⁴²⁶

According to HHS, USAID, and DoD lessons learned documents, high personnel turnover rates also complicated response efforts. Personnel across several agencies (excluding DoD) were frequently assigned to short deployments which, combined with poor communication during transition periods, reportedly limited institutional knowledge transfer and undercut continuity of effort.⁴²⁷

The absence of a permanent USAID mission in Sierra Leone was also cited as a challenge in supporting response and recovery efforts in that country.⁴²⁸

COORDINATION EFFORTS

The significant engagement of several U.S. Government departments and agencies in the response to the crisis in West Africa added to coordination requirements.⁴²⁹ Cross-cutting U.S. Government efforts were coordinated through the National Security Council, which held weekly interagency teleconferences with agency representatives and international partners.⁴³⁰ This coordination was aided by weekly updates prepared by USAID and CDC for the President and the National Security Council.⁴³¹

As the designated lead agency for the U.S. Government's international response to the EVD outbreak, USAID initially managed these efforts through the work of an Ebola Task Force, which had daily engagement with other U.S. Government partners in the response.⁴³² In late 2014, USAID replaced this task force structure with an Ebola Secretariat, which assumed the task force's coordination function in Washington, D.C. In the field, USAID coordinated U.S. Government response efforts through its Disaster Assistance Response Teams, which included USAID personnel as well as staff from CDC, DoD, USPHS, and the U.S. Forest Service.⁴³³

Each federal department and agency involved in the response effort developed its own customized approach to coordinating related activities performed by their respective organizational components.

At the height of the outbreak, DoD coordinated intra-departmental efforts through two primary groups established in response to the EVD crisis. DoD established an Ebola Task Force led by the Assistant Secretary of Defense for Special Operations and Low-Intensity Conflict, and an Ebola Outbreak Working Group led by the Deputy Assistant Secretary of Defense for Stability and Humanitarian Affairs.⁴³⁴ Together, these groups helped provide regular communication across the combatant commands, other EVD response entities within DoD, and stakeholders across the department. Meanwhile, the U.S. Africa Command provided operational coordination on the ground.⁴³⁵

DOS established a dedicated unit, the Ebola Coordination Unit (ECU), to coordinate its EVD response activities.⁴³⁶ The ECU led diplomatic outreach efforts, took the lead in DOS policy formulation efforts, and coordinated the work of the various DOS bureaus and offices involved in the response.⁴³⁷ The ECU also represented DOS at high-level interagency meetings, such as those with the National Security Council.⁴³⁸ The ECU ceased operating on March 30, 2015, after which DOS's EVD response efforts were managed by individual bureaus and offices within the Department.⁴³⁹

Within USAID, an Ebola Task Force, Secretariat, and now, AEU have helped coordinate activity in support of U.S. Government response, recovery, and preparedness efforts. During the reporting period, the AEU held weekly coordination calls with USAID missions in West Africa and hosted weekly meetings with agency operating units involved in the response and recovery efforts.⁴⁴⁰ In addition, the AEU instituted the practice of conducting quarterly program reviews of the work of each USAID operating unit supporting EVD response and recovery efforts. These reviews are designed to ensure that all units have a common understanding of goals and rationale of planned

interventions, the timelines and events affecting activities, potential coordination opportunities among operating units, and related resource considerations.⁴⁴¹ In the field, USAID Missions coordinated with USAID operating units, implementing partners, donors, and international actors on the ground, including public international organizations like WHO.⁴⁴²

Several HHS components were involved in EVD response efforts, including CDC, FDA, USPHS, and ASPR. CDC's EOC served as its command center for monitoring and coordinating the agency's domestic and international response to EVD.⁴⁴³ FDA stood up its own EOC to help coordinate external agency communication, and also established an Ebola Task Force with a focus on coordinating internal FDA activities.⁴⁴⁴ At the height of the response effort, USPHS established an Ebola Response Task Force to coordinate response efforts and ASPR worked with other programs and agencies, such as the Emergency Care Coordination Center, to ensure proper coordination and prevent duplicative efforts.⁴⁴⁵

INTER-AGENCY COORDINATION CHALLENGES

The whole-of-government response to the EVD outbreak in West Africa reportedly presented a number of coordination challenges among the departments and agencies involved. According to after action assessments, while each agency generally understood its own role, some were unclear about the technical capabilities, roles, and responsibilities of other U.S. Government agencies engaged in response efforts.⁴⁴⁶ This reportedly created confusion, as agency representatives had imprecise or incorrect expectations regarding the capabilities, plans, and activities of other participating agencies.⁴⁴⁷

Although USAID was given responsibility for coordinating the U.S. Government's international response to this health emergency, the office leading its response did not have established relationships with other key players in the EVD response. In its after action assessment, OFDA acknowledged that it did not initially have a framework in place to work with CDC or USPHS on an international health emergency of this kind.⁴⁴⁸

Agencies also remarked that the lack of familiarity with the structures and operations of other agencies posed a challenge. OFDA noted that this presented some difficulties for it, and USPHS indicated that a lack of understanding of its organizational structure may have contributed to instances in which it was brought into planning processes late or left out.⁴⁴⁹

USAID, as the lead U.S. Government agency for the international response, deployed DART teams to the region to assess conditions, coordinate responses, and identify gaps. The deployment of these teams is a standard part of USAID's approach to responding to disasters and humanitarian crises. In recognition of the uncharacteristically large medical component of this response effort, USAID integrated CDC personnel into its DART in an official capacity for the first time.⁴⁵⁰ It reportedly took time for agency representatives to adjust to their respective functions and roles in the early stages of the response. Following this initial learning period, however, both agencies reported an improved relationship and greater understanding of one another's roles and capabilities.⁴⁵¹

According to USAID and DoD, however, respective agency roles and responsibilities were not always clearly established at the outset and were a point of debate prior to September 2014 when the President increased the U.S. Government's role in international response efforts.⁴⁵² Uncertainty about roles and responsibilities was reportedly aggravated as priorities and needs shifted within the response effort.⁴⁵³ DoD emphasized that it should remain in a supporting role providing only unique DoD capabilities; a position that may not have always been clear to or supported by other agencies. DoD indicated that a poor understanding of its role by other agencies involved in the response adversely impacted interagency partners early on.⁴⁵⁴ Meanwhile, USPHS and CDC indicated that questions about which interagency partners would be able to provide logistics and life-support services for their personnel and materials deploying to and returning from West Africa complicated these efforts.⁴⁵⁵

Some who commented on agency involvement in international Ebola response efforts acknowledged the positive effects of the extensive interagency coordination that ultimately occurred.⁴⁵⁶ Provided that lessons from the West Africa EVD outbreak are used, some have expressed optimism that the U.S. Government will be in a better position to mount an effective response to future events of this kind.⁴⁵⁷

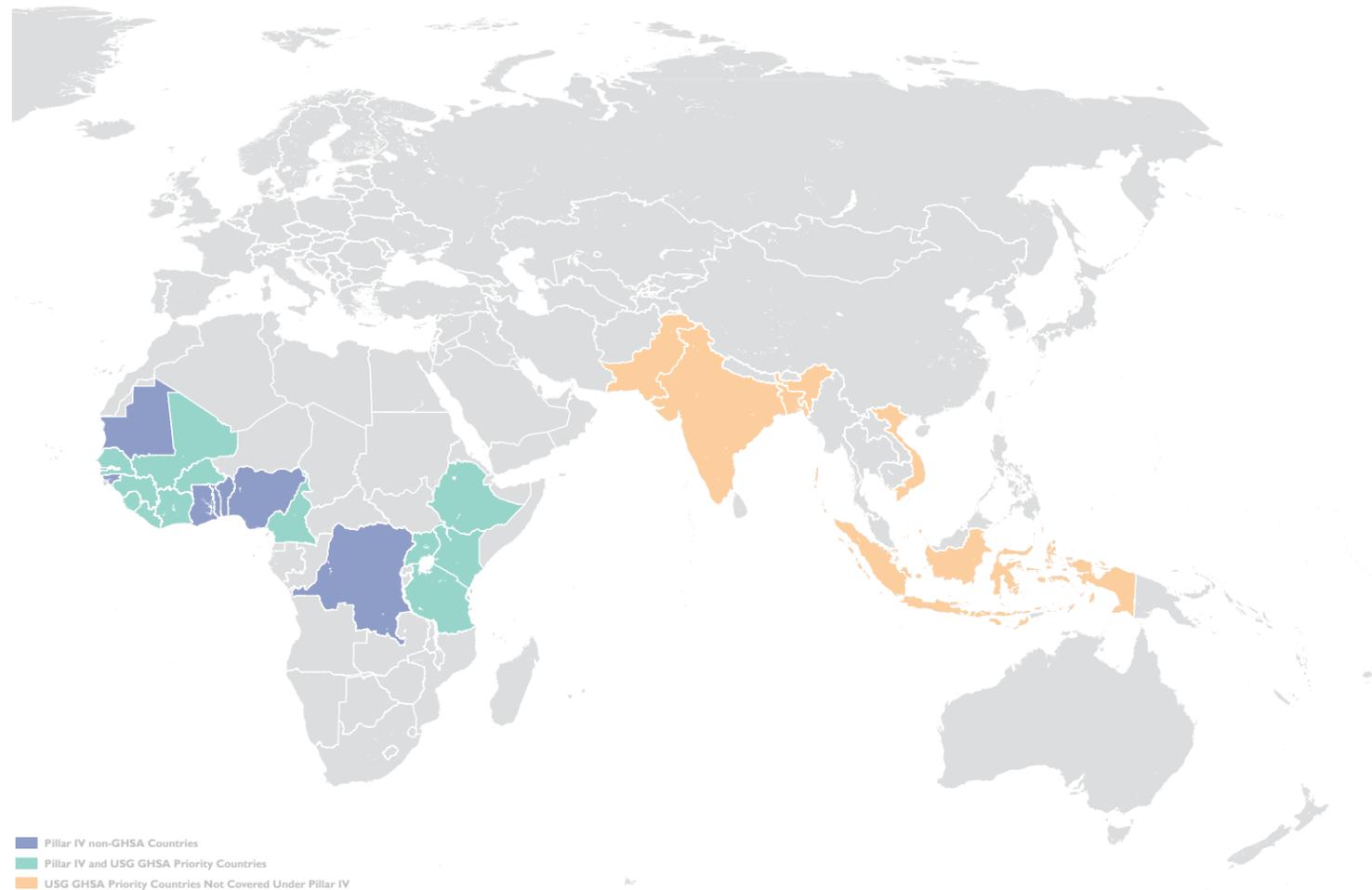


Figure 8: Map of Global Health Security Agenda Focus Countries for U.S. Government Support (Source: USAID, June 25, 2015; CDC, October 30, 2015.)

PILLAR IV: STRENGTHENING GLOBAL HEALTH SECURITY

As the EVD outbreak waned in West Africa and response efforts transitioned to helping the affected countries recover, the U.S. Government increased efforts to promote EVD preparedness in Africa and strengthen global health security to address health threats. In addition to EVD, other health security threats include the possible emergence and spread of new microbes and drug-resistant pathogens; the risks of inadvertent or intentional release of pathogens from research facilities; and the potential acquisition, development, and use of biological agents by malevolent actors.⁴⁵⁸

Accordingly, the fourth Pillar of the U.S. Ebola response and preparedness strategy is to strengthen global health security infrastructure in West Africa and other regions in order to prevent avoidable outbreaks, such as EVD, and enable countries to detect threats and respond rapidly and effectively to future outbreaks.⁴⁵⁹ Global health security efforts seek to strengthen prevention, detection, and response measures. Approaches include promoting effective health institutions and personnel, building emergency management response capacity, and expanding surveillance and laboratory systems.⁴⁶⁰

GLOBAL HEALTH SECURITY AGENDA

In February 2014, the U.S. Government along with 28 countries, WHO, the UN Food and Agriculture Organization, and the World Organization for Animal Health launched the Global Health Security Agenda (GHSA). GHSA's 5-year goal is "to advance a world safe and secure from infectious disease threats."⁴⁶¹ In working toward this goal, GHSA focuses on strengthening countries' capacity to prevent, detect, and respond to infectious disease threats.⁴⁶²

To help drive progress toward GHSA objectives, member countries identified 11 focus areas for action.⁴⁶³ GHSA targets activities that address antimicrobial resistance, zoonotic disease, biosafety and security, and immunization in order to prevent avoidable epidemics.⁴⁶⁴ GHSA efforts also focus on early detection of threats by building national laboratory systems, enhancing real-time surveillance capacity, increasing global health security reporting, and developing the needed public health workforce.⁴⁶⁵ In support of rapid and effective response, GHSA plans to establish and connect EOCs, build capacity for rapid multi-sectoral response and create frameworks for

leveraging partners' medical personnel and countermeasures when needed.⁴⁶⁶

In June 2015, the Group of 7, or G-7, made a commitment to assist at least 60 countries in achieving GHSA and International Health Regulations (IHR) targets over the next 5 years. The U.S. Government committed to assisting at least 30 countries achieve GHSA objectives.⁴⁶⁷ During the initial phase, USAID, CDC, DoD, and other U.S. agencies are coordinating activities in 17 GHSA focus countries. These initial efforts—which include efforts in Guinea, Liberia, and Sierra Leone—involve assistance to develop 5-year country-specific roadmaps and work plans to implement GHSA activities.⁴⁶⁸

During the quarter, CDC, DoD, and USAID worked together to develop roadmaps and annual work plans for 14 GHSA countries.⁴⁶⁹ These plans outline steps and activities for implementing GHSA action packages and achieving GHSA benchmarks in the countries.⁴⁷⁰

GHSA work plans and roadmaps for Guinea, Liberia, and Sierra Leone had not been completed by the end of the reporting period.⁴⁷¹ An interagency U.S. team conducted an internal assessment in Liberia and plans for the country were under development at the end of the quarter.⁴⁷² Plans for Guinea and Sierra Leone were expected to follow soon.⁴⁷³

The GHSA Steering Group—comprised of 10 countries, including the United States—tracks progress, identifies challenges, and oversees implementation of GHSA objectives.⁴⁷⁴ The U.S. Government is co-leading GHSA efforts to build national laboratory systems and is a major contributor in addressing antimicrobial resistance and zoonotic diseases and promoting biosafety and biosecurity, real-time surveillance, and workforce development.⁴⁷⁵

At the September 2015 GHSA summit in Seoul, South Korea, participants from nearly 50 countries, including the United States, discussed how to translate country commitments into concrete actions to strengthen global health security.⁴⁷⁶ Participants discussed the action packages in detail, reported on progress, and participated in a tabletop exercise to practice detection and response activities and identify gaps.⁴⁷⁷ On the margins of the summit, HHS, USAID, and donor partners from Finland and Saudi Arabia met with private sector companies to explore opportunities for the private sector to contribute and support global health security objectives.⁴⁷⁸ In addition, USAID staff took the opportunity to meet with their Korea International Cooperation Agency counterparts to discuss GHSA collaboration.⁴⁷⁹

Pillar IV and GHSA activities complement each other as steps to strengthen EVD preparedness and response also reinforce global health security against other health threats. Pillar IV activities target 12 GHSA-priority countries in Africa* in addition to 8 other non-GHSA African countries** that are at high-risk for EVD and have been identified as needing EVD preparedness capacity building support. During the last quarter, Pillar IV activities were extended to the Democratic Republic of Congo, which is not a GHSA country.⁴⁸¹

USAID obligated \$94 million for GHSA programs during the quarter and CDC made related awards with a combined value of \$51 million to 49 organizations working in 24 countries.⁴⁸²

CDC planned to focus its assistance to the recovery of public health systems in the three countries most severely affected by the EVD epidemic, in line with GHSA activities. CDC plans to develop public health capacity by training epidemiologists, establishing surveillance systems, developing laboratory networks, and managing EOCs.⁴⁸³ CDC also established country offices in Guinea, Liberia, and Sierra Leone to reinforce health systems and support global health security.⁴⁸⁴

USAID's EVD preparedness and global health security activities are primarily implemented in the second phase of the Emerging Pandemic Threats program (EPT 2). EPT 2 was launched in 2014 to build countries' capabilities to detect new disease threats early, enhance national preparedness and response capacities, reduce risky practices and behaviors that can trigger the emergence of new diseases, and meet key GHSA and IHR objectives.⁴⁸⁵

To assist West African countries in meeting the requirements of WHO's Ebola Preparedness Check List, USAID provided support for epidemiological surveillance, laboratory strengthening, infection prevention and control, public awareness and communication, and logistics management.⁴⁸⁶ In Benin, for example, USAID supported IPC training and increased public awareness of EVD.⁴⁸⁷ In addition, USAID's Preparedness and Response project under the EPT 2 program is assisting African countries in the development and implementation of National Preparedness and Response Plans for public health events of unknown etiology.⁴⁸⁸

* The 12 countries are: Burkina Faso, Cameroon, Cote d'Ivoire, Ethiopia, Guinea, Kenya, Liberia, Mali, Senegal, Sierra Leone, Tanzania, and Uganda.

** The 8 non-GHSA countries are: Benin, Democratic Republic of Congo, Gambia, Ghana, Guinea-Bissau, Mauritania, Nigeria, and Togo.

The U.S. Government is supporting EVD preparedness and global health security activities in 20 African countries.

EBOLA PREPAREDNESS CHECK LIST

WHO's Ebola Preparedness Check List is designed to help countries assess their level of readiness to respond to EVD and identify potential readiness gaps.⁴⁸⁹ The check list contains 11 key components ranging from coordination and case management to epidemiological surveillance and financial management.⁴⁹⁰ WHO recommended that all countries in Africa meet minimum preparedness requirements set forth in the check list. WHO also recommended that countries in close proximity to Guinea, Liberia, and Sierra Leone (as well as others identified by WHO having a high risk of future exposure to EVD) implement additional preparedness measures.⁴⁹¹

The U.S. Government is supporting efforts to detect health threats early to enable health officials to better respond and prevent avoidable epidemics. Early detection of health threats requires global biosurveillance networks, rapid sharing and reporting of information, sufficient diagnostic and laboratory capacity, and an effective biosurveillance workforce.⁴⁹² During the quarter, CDC obligated funds to support programs that strengthen disease surveillance, train epidemiologists at the local and national levels, strengthen laboratory systems and clinical laboratory support



A U.S. Navy mobile lab deployed to test for potential Ebola specimens in Bong County, Liberia. (Morgana Wingard for USAID, October 7, 2014)

for EVD rapid diagnosis, and train healthcare workers and community health leaders in IPC activities in Guinea, Liberia, and Sierra Leone.⁴⁹³ Meanwhile, DoD's Armed Forces Health Surveillance Center (AFHSC) collaborated with the Armed Forces of Liberia to establish a disease surveillance information system to enhance existing diagnostic capacity.⁴⁹⁴ The project enables Liberia's Armed Forces to serve as an active player in responding to EVD and other emerging infectious diseases and to help meet GHSA and IHR objectives.⁴⁹⁵

Laboratories and diagnostic facilities require proper equipment, procedures, and precautions in order to effectively diagnose diseases, reduce risks of accidental exposure by personnel, and provide for the security of dangerous pathogens within facilities.⁴⁹⁶ DOS's Office of Cooperative Threat Reduction (CTR) provided specially-equipped vehicles for the secure and safe transport of EVD patients, remains, and materials in Guinea, Liberia, Mali, and Sierra Leone.⁴⁹⁷ CTR supported another program to improve pathogen security in Guinea, Liberia, and Sierra Leone that focused on strengthening biosecurity practices and training laboratory personnel on bio-risk management principles.⁴⁹⁸ CTR conducted risk assessments at highly vulnerable laboratories and planned to provide security upgrades to ensure the secure storage of Ebola specimens.⁴⁹⁹ Meanwhile, DoD's CBEP initiated discussions with host governments and relevant stakeholders on the development of appropriate biosafety and biosecurity policies in establishing sample repositories for the storage of EVD samples.⁵⁰⁰

CTR also supported programs to integrate law enforcement personnel into EVD response efforts and enhance the security of Ebola samples.⁵⁰¹ Last year, CTR reportedly trained more than 400 Guinean and 1,200 Liberian law enforcement personnel on the use of protective equipment, the medical transport of sick patients, and prevention of the acquisition of Ebola samples for malevolent purposes.⁵⁰²

Responding to biological incidents rapidly and effectively depends on coordinating multi-sectoral teams, sharing information in real-time, and investigating the source of the incident. In addition to supporting countries in the establishment of national EOCs, DoD is assisting 17 West African countries to enhance all-threat response capabilities to prevent or mitigate future outbreaks in the region through the West African Disaster Preparedness Initiative.⁵⁰³ This program focuses on providing emergency response training for host governments to develop a whole-of-government, all-hazards emergency response infrastructure.⁵⁰⁴ As part of the program, DoD supported a training event from July 2015 through October 2015 in Ghana to apply lessons learned from the EVD outbreak and other natural disasters to strengthen the capacity of partner nations

to implement an all-hazards approach to disaster preparedness and response management.⁵⁰⁵ This event identified gaps in plans, workforce development, infrastructure, and communications. Subsequent follow-on activities have started to address those gaps.⁵⁰⁶

LESSONS FROM EVD OUTBREAK IN PREPARING FOR FUTURE RESPONSES TO INTERNATIONAL HEALTH CRISES

The EVD outbreak highlighted weaknesses in international health institutions' ability to prevent an avoidable disease outbreak. At the 68th World Health Assembly in May 2015, WHO member states approved structural reforms to WHO's emergency response program, including the establishment of a \$100 million emergency contingency fund, the institution of an all-hazards emergency program, and development of clear command and control mechanisms within headquarters, regional, and country offices.⁵⁰⁷ These reforms were designed to address identified shortcomings in WHO's response to the 2014 outbreak, and enable WHO and the international community to better prepare for and respond to future emergencies and disease outbreaks.⁵⁰⁸ Representatives from CDC and USAID are currently members of the WHO Director General's advisory group on the Reform of the Organization's Work in Outbreaks and Emergencies with Health and Humanitarian Consequences.⁵⁰⁹ The advisory group provides advice and guidance to the WHO Director General on changing WHO's management processes for responding to outbreaks and emergencies with health and humanitarian consequences.⁵¹⁰

U.S. Government agencies with a significant role in the EVD response also conducted internal assessments of their respective response activities and developed lessons learned resources for responding to future international health crises.

While CDC will complete the formal process of identifying and developing lessons learned and corrective actions when the response to the EVD outbreak concludes, the agency has identified some initial lessons learned to shape future response efforts.⁵¹¹ To prevent, detect, and respond to existing and future health threats, CDC identified a need to enhance infrastructure, surveillance and coordination among nations, develop and improve the public health workforce, and equip more countries with networked EOCs.⁵¹² With respect to working with other U.S. Government agencies, CDC recommended:

- Expanding international logistics capabilities across the U.S. Government to facilitate smooth and efficient staff

deployments,

- Reducing redundancies and improving coordination of activities among various U.S. Government agencies operating in the same countries, and
- Identifying other U.S. Government assets and capabilities overseas for use during an international emergency.⁵¹³

While a policy-focused DoD Ebola response lessons learned report was being finalized with an anticipated completion date of October 31, 2015, DoD completed a study of OUA.⁵¹⁴ The OUA study identified 19 major findings in major topic areas covering DoD's preparedness, the strategic decision making to involve DoD, the military response, the transition of response efforts to non-DoD entities, and implications for future operations.⁵¹⁵ The internal DoD operational analysis of OUA revealed gaps in existing policies and medical support capabilities, and contained 120 specific internal recommendations.⁵¹⁶

USAID's OFDA released an internal assessment of its international response to the EVD outbreak in September 2015.⁵¹⁷ The top priority recommendations from the report included measures to:

- Improve catastrophic disaster planning for interagency crisis responses,
- Clarify the division of labor and the trigger for OFDA's involvement in responding to epidemics overseas,
- Support institutional changes within the UN to improve multi-donor response coordination in the future, and
- Communicate information on the successes and failures of UNMEER and the humanitarian architecture model for the EVD response.⁵¹⁸

CDC, DoD, and USAID all recommended continuing interagency cooperation and coordination to sustain the partnership model developed during the EVD response. Each agency also acknowledged a need for more clearly defined roles and responsibilities in future interagency responses to international crises.⁵¹⁹ All three also noted that preparedness for future disease outbreaks outside the United States requires improvements in partner countries' disease surveillance and response capacity, an aim consistent with activities under GHSA and Pillar IV.⁵²⁰

OVERSIGHT COORDINATION, PLANS, & ACTIVITIES

OVERSIGHT FRAMEWORK & COORDINATION

Congress prescribed a new oversight framework for overseas contingency operations (OCOs) in the 2013 National Defense Authorization Act (P.L. 112-239, January 2, 2013). This law amended the IG Act of 1978, adding Section 8L to provide for increased coordination, reporting, and oversight relating to OCOs. Under this arrangement, existing agency-specific OIGs for DoD, DOS, and USAID are to provide more intensive coordination of oversight efforts and additional reporting regarding the progress of OCOs and corresponding oversight efforts. Section 8L requires the Chair of the Council of the Inspectors General on Integrity and Efficiency (CIGIE) to designate a Lead IG to coordinate these efforts within 30 days after the commencement or designation of an OCO that exceeds 60 days.⁵²¹

On October 16, 2014, the President issued an Executive Order invoking his authority under Title 10, U.S.C. §12304 to authorize the Secretary of Defense to order reserve units and individuals to active duty to support OUA, the fight against the EVD outbreak in West Africa.⁵²² The Secretary exercised this authority on November 13, 2014,⁵²³ and the U.S. Army issued mobilization orders for reservists on November 25, 2014.⁵²⁴ These actions, in turn, triggered requirements under Section 8L of the IG Act. Pursuant to these requirements, on February 24, 2015, the CIGIE Chair designated Jon T. Rymer, the DoD Inspector General, as the Lead IG for OUA.⁵²⁵ Mr. Rymer subsequently appointed Catherine M. Trujillo, the USAID Acting Deputy Inspector General, as the Associate IG to lead OUA oversight planning, coordinating and reporting activities.⁵²⁶

Since October 2014, representatives from the OIGs with an international Ebola preparedness and response oversight mandate have met regularly to share oversight and reporting plans and activities, and to explore opportunities for coordination. To ensure comprehensive coverage of the U.S. Government's Ebola response and preparedness efforts, oversight coordination and planning has extended beyond the three aforementioned OIGs to include the HHS OIG. In addition, this report describes related work on the part of the Department of Homeland Security (DHS) OIG and Government Accountability Office (GAO).

Initial oversight activities focused on the first Pillar of the U.S. Government response to Ebola: controlling the outbreak. As the responding federal departments and agencies increasingly shift focus to address second-



One of the two generators USAID donated to power the Ebola response at the Ebola Treatment Unit at Island Clinic, Liberia. (Photo by Morgana Wingard for USAID, September 22, 2014)

order effects of the epidemic—building coherent leadership and operations, and strengthening global health security—the oversight community will adjust its focus to provide needed coverage.

Section 8L of the IG Act of 1978, as amended, requires that the Lead IG review and ascertain the accuracy of information provided by Federal agencies relating to obligations and expenditures, costs of programs and projects, accountability of funds, and the award and execution of major contracts, grants, and agreements in support of the OCO. Each OIG has identified its own specialized approach for addressing this requirement. These approaches are described in the subsections for DoD, DOS, HHS, and USAID OIGs.

Section 8L of the IG Act also includes a requirement for quarterly reporting on the progress of the OCO. This is the final quarterly report on international Ebola response and preparedness activities in compliance with reporting requirements defined in Section 8L of the IG Act. Section 8L requirements terminate at the end of the first fiscal year in which the total amount appropriated for the pertinent OCO is less than \$100 million.⁵²⁷ Although Congress appropriated substantial funding for Ebola response and preparedness in December 2014, it designated the funds as “emergency,” and not “overseas contingency operation” funds, and did not link them to OUA. Given the June 30, 2015, termination of OUA, Section 8L responsibilities relating to Ebola response and preparedness activities concluded with the requirement to report on these activities through September 30, 2015.⁵²⁸

Although Section 8L requirements for oversight coordination concluded at the end of FY 2015, the OIGs for DoD, DOS, HHS, and USAID plan to continue working together to provide coordinated oversight of international Ebola response and preparedness efforts. At the end of the reporting period, these four OIGs were in the process of finalizing a joint strategic oversight plan for these efforts. This plan includes information on the organization of oversight efforts, strategic oversight issue areas of focus, information on coordination of specific oversight activities, and communications and outreach efforts.

AUDIT AND INSPECTION PLANS AND ACTIVITIES

The DoD, DOS, HHS, DHS, and USAID OIGs all have oversight roles relating to U.S. Government Ebola response and preparedness programs and operations. GAO also has oversight functions that extend to U.S. Government international Ebola response, recovery, and preparedness efforts. These oversight bodies have issued 4 reports

related to Ebola response and preparedness, while work is in progress or planned on 27 other audit or inspection-related oversight activities.

DEPARTMENT OF DEFENSE OIG

Two DoD OIG components are engaged in Ebola-related oversight activities: the Office of Auditing and the Office of Special Plans and Operations.

Completed Work

DoD OIG has completed one audit and one evaluation of Ebola-related activities.

U.S. Army Contracting Command—Rock Island Needs to Improve Contracting Officer’s Representative Training and Appointment for Contingency Contracts (Report No. [DODIG-2015-147](#), July 10, 2015). The objective of this audit was to determine whether Army controls for monitoring contractor performance were effective for supporting OUA contracts. Specifically, the audit examined whether Army contracting officer’s representatives (CORs) performed effective contractor surveillance on seven OUA task orders, whether CORs were properly trained and appointed, and whether CORs implemented well-developed quality assurance surveillance plans.

The audit found that U.S. Army Contracting Command—Rock Island controls for monitoring contractor performance for seven task orders supporting OUA, valued at \$7.6 million, were generally effective. However, for one of seven task orders the U.S. Army Contracting Command—Rock Island procuring contracting officer did not appoint CORs in accordance with DoD requirements. This occurred because the procuring contracting officer did not include the COR appointment authority in the administrative contracting officer’s delegation letter. The Army had not responded to the report’s one recommendation at the time of its issuance and, as a result, DoD OIG requested that Army officials provide comments on the recommendation after the issuance of the final report.⁵²⁹

Evaluation of DoD Force Health Protection Measures During Operation United Assistance (Report No. [D2015-D00SPO-0080.000](#), September 30, 2015).

This evaluation was designed to assist DoD in ensuring the health and well-being of personnel deployed during OUA. The numerous endemic diseases of West Africa presented a force health protection threat to all deployed personnel. DoD OIG examined the force health protection

measures used to protect against malaria, yellow fever, food and waterborne illnesses, EVD, and other illnesses and injuries.

The evaluation found discrepancies between DoD's OUA policies and existing capabilities to transport and treat known or suspected highly contagious patients. Existing U.S. Transportation Command policy restricted the movement of highly contagious patients within the patient movement system. However, in the course of the epidemic, DoD developed in-air isolation capacity to move contagious personnel safely. Using this capability would have conflicted with existing policy, which had not changed to reflect the new capacity.

While DoD responded to the EVD crisis by developing the capability to treat EVD patients, the evaluation revealed that DoD did not establish detailed guidance on EVD treatment at military treatment facilities. DoD policy did not support programming decisions and related funding for sustainment and training of these capabilities. As a result, the newly developed capabilities to transport and treat EVD patients were placed at risk for use in future military operations.

DoD OIG also found that there were conflicting clinical laboratory requirements for the storage of blood products from patients who had been diagnosed with highly contagious diseases, such as EVD. Leaders in clinical laboratories were uncertain as to what rules applied to maintaining blood samples known to contain Ebola virus. The Assistant Secretary of Defense for Health Affairs did not publish guidance to the Services or the National Capital Region Medical Directorate. Hospitals with the capability to perform clinical laboratory testing on specimens containing select agents or toxins (such as Ebola virus) would have had to violate policy to meet laboratory-accreditation organizations' guidance and requirements. Alternatively, by following current policy, the hospitals would violate the requirements of the laboratory-accrediting agencies and risk loss of their accreditation. These conflicting requirements could jeopardize hospital accreditation status with one or more of the U.S. laboratory-certifying agencies.

DoD OIG also found an inequitable disbursement of family separation allowance for those Service members who were required to spend 21 days physically separated from their families following their deployment to Ebola virus endemic regions of West Africa. The United States Code authorizes Family Separation Allowance payments for Service members *only* when away from their permanent station. Service members assigned to controlled monitoring at their permanent station did not receive Family Separation Allowance, while Service members assigned to controlled monitoring at a location other than their permanent station did receive the allowance.⁵³⁰

DoD OIG made three recommendations. DoD officials concurred with two recommendations and non-concurred with another. DoD OIG requested that DoD provide additional information in response to one recommendation by October 30, 2015.

Ongoing Work

One DoD OIG audit of Ebola-related activities was under way at the end of the reporting period.

Audit of Contract Oversight for the Logistics Civil Augmentation Program Task Orders Supporting Operation United Assistance. This audit will determine whether the U.S. Army is providing sufficient contract oversight for the Logistics Civil Augmentation Program task orders issued to support OUA.⁵³¹

Planned Work

Financial Information Verification Activity. DoD OIG will ascertain the accuracy of OCO obligations, disbursements, and accountability of amounts reported in the DoD Cost of War report, as applicable, and other relevant OCO reports. As part of this work, DoD OIG will add steps to test the accuracy of sampled OCO transactions from the accounting system to the supporting documentation. DoD IG will report on its findings.⁵³²

Department of State OIG

DOS OIG had one audit of Ebola-related activities under way at the end of the reporting period.

Ongoing Work

Audit of Aeromedical Biological Containment Evacuation Contracts Within the Office of Medical Services. Aeromedical biological containment evacuation contracts provide transportation for emergency response personnel into and out of hazardous or non-permissive environments, and medical evacuation of critically ill or injured patients, including those infected with unique and highly contagious pathogens. These contracts also support domestic and overseas missions and standing requirements for international medevac support as part of the Department's contribution to the global Ebola response. This audit will determine whether the Bureau of Administration, Office of Logistics Management, Office of Acquisitions Management, and the Office of Medical Services properly administered and provided oversight of aeromedical biological containment evacuation contracts in accordance with acquisition regulations, and whether the Office of Medical Services received reimbursement for non-DOS medical evacuations as required.⁵³³

Planned Work

Financial Information Verification Activity. DOS OIG will verify financial data provided by DOS to determine whether the information is accurate, using standard auditing processes and sampling, consistent with auditing plans.⁵³⁴

DEPARTMENT OF HEALTH AND HUMAN SERVICES OIG

HHS OIG has an ongoing Office of Evaluations and Inspections review related to EVD. The Office of Audit Services is planning one audit of international activities, and will also conduct financial verification related to the agency's EVD expenditures.

Ongoing Work

Review of Hospital Preparedness and Response to High-Risk Infectious Diseases. Hospitals serve an important community role in preparing for and responding to public health threats from high-risk infectious diseases. Several HHS operating divisions provide guidance, oversight, and technical assistance to hospitals in fulfilling this role, including CDC, the Centers for Medicare and Medicaid Services, and ASPR. The objectives of this evaluation are to examine HHS guidance, assistance, and oversight of hospital preparedness and response to high-risk infectious diseases; and to determine the current status of and barriers to hospital preparedness at a nationally projectable sample of hospitals. The evaluation plan for this review is currently under development and the status of the evaluation is ongoing.⁵³⁵

Planned Work

Review of the Centers for Disease Control and Prevention's Ebola-Related Awards. The Consolidated and Further Continuing Appropriations Act, 2015 (P.L. 113-235) provided \$2.7 billion in emergency funding to HHS for Ebola preparedness and response activities. Of this total, \$1.771 billion was allocated to CDC "for 'CDC-Wide Activities and Program Support,' ...to remain available until September 30, 2019, to prevent, prepare for, and respond to Ebola domestically and internationally."

CDC specifically identified \$1.2 billion for its international response efforts as follows:

- \$603 million for international Ebola response and preparedness activities in the current three epidemic and high-priority countries, including neighboring countries.
- \$597 million to support the National Public Health Institutes and implementation of the Global Health Security Agenda.

Additional Global Health Security countries will be prioritized based on urgently needed investments in vulnerable nations, transport hubs, and states without the capacity to prevent the global spread of Ebola or stem the tide of future threats.

The objective of this audit is to determine whether CDC awarded Ebola-related funds in FY 2015 in compliance with federal and departmental regulations.

HHS OIG anticipates beginning this review in early FY 2016.⁵³⁶

Financial Information Verification Activity. HHS OIG analyzes data to identify high-risk areas and reviews other relevant factors to determine how to focus its oversight resources. HHS OIG is applying similar analysis to Ebola response, recovery, and prevention efforts and plans to perform oversight work accordingly.⁵³⁷

DEPARTMENT OF HOMELAND SECURITY OIG

Completed Work

DHS OIG completed one audit of DHS relevant to Ebola preparedness and response activities in light of its focus on personal protective equipment management.

DHS Has Not Effectively Managed Pandemic Personal Protective Equipment and Antiviral Medical Countermeasures (Report No. [OIG-14-149](#), August 26, 2014).

DHS OIG audited DHS's pandemic preparedness efforts to determine whether DHS had effectively managed its pandemic preparedness supply of personal protective equipment and antiviral medical countermeasures. DHS OIG determined that DHS did not adequately conduct a needs assessment, and did not effectively manage its pandemic preparedness supply of PPE and antiviral medical countermeasures as part of pandemic preparations. As a result, DHS could not ensure it had sufficient PPE and antiviral medical countermeasures for a pandemic response. In addition, DHS OIG identified concerns related to oversight of antibiotic medical countermeasures.

DHS OIG made 11 recommendations to strengthen program management, performance, and oversight, and DHS concurred with all of them. Eight of these recommendations have been resolved and closed, while the remaining three are resolved but pending implementation of DHS corrective actions.⁵³⁸

Ongoing Work

DHS OIG is currently conducting an audit that includes a focus on Ebola response and DHS pandemic planning. In relation to this ongoing work, DHS OIG has reviewed DHS's past and current pandemic planning, including the 2009 H1N1 Implementation Plan and the Pandemic Workforce Protection Plan; met with personnel from the Office of Health Affairs, Office of Operations Coordination and Planning, and the Directorate for Management; and interviewed emergency preparedness staff at the Transportation Security Administration, U.S. Immigration and Customs Enforcement, U.S. Secret Service, National Protection and Programs Directorate, U.S. Citizenship and Immigration Service, U.S. Coast Guard, U.S. Customs and Border Protection and Federal Emergency Management Agency headquarters offices. DHS OIG has also visited the Transportation Security Administration, U.S. Customs and Border Protection, and U.S. Coast Guard field offices to understand their local pandemic planning and response to Ebola, and interviewed CDC personnel to understand their collaboration with DHS on the implementation of the screening procedures.

Audit of DHS Ebola Response. This audit will determine if DHS has effectively implemented enhanced screening measures for a response to an Ebola outbreak.⁵³⁹

Audit of DHS Pandemic Planning and Response. This audit will determine if DHS has implemented adequate preparedness plans to continue mission-essential functions during a pandemic.⁵⁴⁰

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT OIG

USAID OIG has an array of completed, ongoing, and planned oversight efforts relating to Ebola activities. These efforts are managed by OIG units in Washington, D.C., and Dakar, Senegal.

Completed Work

While USAID OIG developed plans for the below audit prior to the Ebola outbreak, the audit reinforces systems that will promote accountability in the expenditure of USAID funds related to Ebola.

Audit of USAID/Guinea's Systems for Ensuring Appropriate Oversight of Funded Programs (Report No. [7-675-15-003-P](#), November 6, 2014).

Contracts, grants, and cooperative agreements are the main tools USAID uses to provide its foreign assistance programs. Agency rules and regulations state that foreign NGOs spending more than \$300,000

in USAID funds during the fiscal year are required to have an annual financial audit, and those that spend more than \$500,000 throughout the award must have a close-out audit. To make sure the financial audits are monitored properly, USAID missions must maintain a list of all awards. USAID/Guinea's FY 2013 award list had 48 awards worth about \$135 million. Ten of them, worth \$6 million, were made to foreign organizations or the Government of Guinea.

USAID OIG determined that USAID/Guinea did not manage its audit program effectively. For instance, a review of the mission's award list showed that 22 expired awards dating back to 1999 still appeared in the financial systems with an open status, which mission officials attributed, in part, to high staff turnover. They said that certain close-out procedures, like negotiated indirect cost rate agreement audits, are the responsibility of USAID in Washington, D.C., and that employees there had not completed them on time.

In addition, the mission did not verify whether some audits were performed in accordance with Agency policies and submitted on time. In one example, an audit on an implementer was scheduled for completion in September 2013, but was actually finished in June 2014, 9 months later. In this case, mission officials said they believed that the prime recipient was responsible for verifying that audits of sub-recipients were conducted. They also said they did not know they needed to review the statement of work for a sub-recipient that spent more than \$300,000 of USAID funds within its fiscal year.

USAID OIG made four recommendations to improve the management of USAID/Guinea's systems for ensuring appropriate oversight of funded programs. USAID took final action on each of USAID OIG's four recommendations.

Ongoing Work

As of September 30, 2015, USAID OIG had five audits underway that relate to USAID's management of medical commodities during the response; its decisions regarding acquisition and assistance instruments used; the effectiveness of social mobilization, case detection, and case management efforts; FFP programs that address food insecurity stemming from the EVD outbreak; and the management and use of treatment and isolation facilities in Liberia and Sierra Leone. This work is being conducted by the Regional Inspector General office in Dakar, and the Performance Audits Division based in Washington, D.C.

Audit of Selected Activities From OFDA's Response to the Ebola Crisis in Liberia. The Assisting Liberians with Education to Reduce

Transmission program is intended to address several EVD Pillar I response needs in Liberia, which had received the highest level of humanitarian assistance provided by USAID for EVD response activities. Global Communities, the implementer for this program, is one of a small number of awardees to receive an award valued in excess of \$20 million to implement EVD response Pillar I activities. The organization operates in all 15 counties in Liberia and is responsive to emerging hotspots. The program's community outreach and prevention messaging, along with support for safe burial teams and contact tracing activities, are significant elements in reducing the probability of a more rapid rate of EVD infection.

The objective of this audit is to determine whether the program is achieving its goal of assuring a maximum level of community preparedness for and responsiveness to exposure to Ebola through effective social mobilization, case detection, and case management.

Audit of USAID's Use of Acquisition and Assistance Implementing Instruments in Responding to Ebola. This audit will provide an overview of how USAID brought implementing partners on board in response to a rapidly moving crisis. The audit will determine whether the acquisition and assistance instruments USAID used, as well as selected statements of work for those instruments, were appropriate for implementing USAID's Ebola response strategy.

Audit of USAID's Management of Medical Commodities Provided in Response to the Ebola Outbreak. The provision of protective equipment, medical supplies, and other commodities has been a crucial part of international community and U.S. Government response efforts. To address limitations in the availability of needed equipment, supplies, and commodities, USAID has provided funds to purchase and distribute a large volume of material in various parts of West Africa. Commodity supply chains can be subject to mismanagement and waste during a crisis. This audit will help identify areas of vulnerability and help USAID design and implement controls to mitigate these vulnerabilities during future crises. USAID OIG is conducting this audit to determine whether USAID made informed decisions in purchasing, distributing, and managing commodities to effectively respond to the Ebola outbreak.

Audit of Selected Activities From FFP's Response to the Ebola Crisis in West Africa. According to the UN, as of December 2014, approximately 500,000 people in Guinea, Liberia, and Sierra Leone were experiencing severe food insecurity as a result of the EVD outbreak. To address the increased food insecurity resulting from disrupted agricultural production and trade, market and border closures, and price increases in food and transportation, USAID funded emergency interventions that

provided cash, food vouchers, and agricultural inputs to households impacted by the secondary effects of Ebola – Pillar II activities. This activity is intended to allow households to sustain their food consumption through the lean season while allowing them to resume agricultural and other livelihood activities without losing previous development gains.

To address several secondary effects of Ebola, FFP awarded Mercy Corps, Project Concern International, Catholic Relief Services, and Save the Children grants to implement Pillar II activities in acutely affected regions of Guinea, Liberia, and Sierra Leone. The four grants are valued at approximately \$22.7 million and are intended to benefit more than 300,000 people. The interventions funded by FFP align with the economic recovery plan presented in April 2015 by the Presidents of the three countries most impacted by Ebola. The plan called on the international community to assist with financial support to provide cash transfers and other assistance to those severely affected by the economic downturn in the region. This audit will determine whether select FFP programs are on track to address food insecurity resulting from the effects of Ebola.

Audit of USAID/OFDA Funded Management and Utilization of Ebola Treatment Units and Community Care Centers in Liberia and Sierra Leone. This audit will determine whether USAID/OFDA effectively managed and utilized Ebola treatment units and Community Care Centers to support host country government needs. One of the primary causes for EVD infection in Liberia, Sierra Leone, and Guinea was the lack of adequate healthcare systems. Most of the areas affected by the disease did not have health facilities to treat patients. In addition, existing hospitals did not have enough beds or medical supplies. Part of the funding from the U.S. Government assisted Liberia with the construction and provisioning of temporary and permanent structures to treat Ebola.

Planned Work

USAID OIG developed plans to conduct one review and seven audits in FY 2016. As USAID programs and activities in some of these areas may change, the specific focus of individual audits and reviews noted below is also subject to change.

- Audit of Selected USAID/OFDA-Funded Training of Healthcare Workers in Ebola Affected Countries
- Review of USAID/OFDA's Transition of Selected Ebola Response Activities and Assets in Liberia
- Audit of Selected Activities for USAID/OFDA's Response to the Ebola Crisis in Sierra Leone

- Audit of USAID/Liberia-Funded Ebola Program to Help Rebuild Liberia's Healthcare System
- Audit of USAID's Ebola Response to the Agriculture Value Chain in West Africa
- Audit of USAID/Liberia's Educational Capacity-Building Program
- Audit of USAID's Ebola Response Programs for Access to Water Supply and Sanitation Services in West Africa
- Audit of USAID/Liberia Access to Microfinance Program

In addition, USAID OIG plans the following activities:

Financial Information Verification Activity. USAID OIG will add discrete steps to its future Government Management Reform Act work to test financial data from a sample of Ebola response, recovery, and preparedness awards. The results of this work will be folded into overall Government Management Reform Act report results and will also be reported in a separate product with a specific focus on the testing of awards related to Ebola response, recovery, and preparedness efforts

Other Financial Oversight Activity. USAID OIG will provide oversight of financial audits conducted by U.S. and international independent public accounting firms of USAID partners implementing Ebola programs and activities in Guinea, Liberia, and Sierra Leone. In connection with these efforts, USAID OIG plans to obtain and review mission and agency audit plans and lists of awards for USAID's Ebola programs to ensure that required financial audits are performed. These audits will determine whether funds appropriated for USAID Ebola initiatives are expended according to established laws, regulations, and cost principles, and auditors will test costs to determine whether they are allowable, allocable, and reasonable. In addition, USAID OIG plans to examine pre-award reviews that USAID performed for recipient organizations that do not have experience working with USAID, and then follow-up on related recommendations to determine whether corrective actions or mitigating steps have been taken. USAID OIG will examine implementer and program risk information in determining when to supplement standard organization-wide financial audits of U.S.-based entities and project-specific audits of international entities with additional targeted financial audit work.

In addition to the above work, OIG is planning the following two audits in FY 2016 that may report on matters related to EVD response, recovery, or preparedness.

Audit of the Health Systems Strengthening Programs in Selected USAID Missions in Africa. Sub-Saharan Africa remains the region most vulnerable to and most affected by infectious disease. Within the past 40 years, several well-known and treatable infectious diseases—such as malaria, tuberculosis, and cholera—have reemerged or spread geographically, often in more virulent or drug-resistant forms. Other incurable infectious diseases, including HIV/AIDS and EVD, have also emerged. USAID's programs to strengthen health systems in Sub-Saharan Africa provide support for effective country health systems that are efficient, responsive, and equitable. This audit will determine whether the programs in selected USAID missions in Africa improved local healthcare systems' responsiveness and ability to treat, control, and prevent infectious diseases.

Audit of Selected USAID/West Africa Missions' Efforts to Align Their Development Strategy with Host Countries' Development Challenges. USAID's policy framework encourages partnership and investment between USAID, country leaders, and local communities in development initiatives so leaders can create sustainable outcomes. Since the implementation of the policy framework, USAID missions in the West Africa region have partnered with leaders, local organizations, and other donors to identify country-specific development challenges. These missions in turn developed country development cooperation strategies. This audit will determine whether the strategies of select West Africa missions are aligned with the identified country-specific development challenges.

In addition to the above, OIG has tentative plans to address the Agency's Ebola preparedness efforts and work under the Global Health Security Agenda.

GOVERNMENT ACCOUNTABILITY OFFICE

GAO oversight activities are currently being conducted under section 9005 of the Consolidated and Further Continuing Appropriations Act, 2015 (P.L. 113-235, December 16, 2014), which provides for GAO oversight of funds appropriated to USAID and DOS for Ebola response and preparedness. During the reporting period, GAO had one related engagement under way.

Ongoing Work

Review of Ebola Response and Preparedness. The review will address DOS and USAID activities to prevent, prepare for, and respond to the 2014 EVD outbreak in West Africa. In particular, GAO plans to examine: the measures DOS and USAID took to be prepared to respond

to an Ebola outbreak prior to the 2014 outbreak in West Africa; the actions DOS and USAID have taken and funding used to respond to the outbreak; and key lessons learned from the response effort.⁵⁴¹

INVESTIGATIVE OUTREACH, HOTLINES, AND OTHER ACTIVITIES

Outreach

OIG provided fraud awareness briefings during the reporting period to promote awareness of fraud risk and appropriate reporting of instances of suspected fraud. USAID OIG provided these briefings to USAID staff, implementers, and local officials in West Africa focused on the Ebola response. During the reporting period, USAID OIG conducted seven fraud awareness briefings for 149 attendees in Guinea. The Defense Criminal Investigative Service, which is DoD OIG's criminal investigations component, maintains regular liaison with contracting and support commands, such as the Defense Contract Management Agency, the Defense Logistics Agency, the U.S. Army Corps of Engineers, and the Joint Regional Contracting Commands. The Defense Criminal Investigative Service conducted two fraud awareness briefings during this period for 80 attendees, most of whom were contracting personnel in Germany who may have an impact on contracts in Africa.⁵⁴²

Hotlines

USAID OIG maintains a dedicated Ebola Hotline to receive complaints of fraud, waste, or abuse relating to U.S. Government programs supporting the response to contain and stop the spread of EVD, mitigate second-order effects, and strengthening global health security. Complaints to the Ebola Hotline may include information about mismanagement or violations of law, rules, or regulations by U.S. Government employees, implementers of U.S. Government-funded programs, or program participants. USAID OIG accepts complaints directly from employees, program participants, or the general public. The Ebola Hotline is accessible through a web-based form on the USAID OIG webpage in English and in French as well as by telephone, fax, and mail.

Telephone: 1-800-230-6539 or 202-712-1023

Email: ebolahotline@usaid.gov

PDF form for fax or mail: http://oig.usaid.gov/sites/default/files/ebola_complaint_form.pdf

Fax: 202-216-3801

Mailing address:

U.S. Agency for International Development
Attn: Ebola Hotline
Office of Inspector General
P.O. Box 657
Washington, DC 20044-0657

Hotline Web site in English:

<http://oig.usaid.gov/content/ebola-hotline-report-fraud-or-corruption>

Hotline Web site in French:

<http://oig.usaid.gov/content/ebola-hotline-report-fraud-or-corruption-french>

USAID OIG has received information through the Ebola Hotline that has informed audit and investigative work. As allegations are received, USAID OIG will continue to work with its partners in DoD, DOS, and HHS OIGs, and other domestic and international law enforcement partners, as appropriate, to investigate them. USAID OIG investigative work is managed from headquarters in Washington, D.C., and assigned to investigators posted in Dakar, Pretoria, and Washington, D.C.

The DoD Hotline continued emergency procedures to handle any contact alleging a potential Ebola infection, including immediate notification to CDC.⁵⁴³

Other Investigative Activities

During this period, USAID OIG opened three Ebola response-related investigations. Two investigations were subsequently closed, while two investigations (including one from the previous quarter) remained ongoing at the end of the quarter. DoD OIG closed one OUA-related investigation during the quarter while another investigation continued through the quarter's end.⁵⁴⁴

A DoD OIG investigation led to two debarments during the previous reporting period. The debarments followed on a DoD OIG inquiry into an inappropriate modification of an agreement. DoD awarded the underlying blanket purchase agreement to provide drivers and labor, materials, equipment, and services incidental to vehicles in support of OUA. A former employee of the firm awarded the blanket purchase agreement requested that the agreement be modified to change the firm's name under the pretense that there was an administrative error when inputting the company name into the procurement system. As a result, DoD published a modification to the agreement.⁵⁴⁵

OVERSIGHT

During its investigation of the matter, DoD OIG confirmed that the firm's name was properly reflected in the procurement system at the outset and that the modification was not warranted. Background checks revealed that the individual who requested the name change in the agreement had been convicted and sentenced to prison for conspiracy to commit healthcare fraud in addition to other charges, and had been previously debarred by HHS. DoD OIG referred the matter to the U.S. Army for action and, on May 6, 2015, the Army issued notices of debarment for the individual and the firm he identified as the agreement recipient in the modification. The debarment is effective until May 5, 2018.⁵⁴⁶

No DHS, DOS, or HHS OIG investigations related to international Ebola work were opened, ongoing, or closed during this reporting period. There were also no related referrals to the Department of Justice from the OIGs during this period.

§8L. SPECIAL PROVISIONS CONCERNING OVERSEAS CONTINGENCY OPERATIONS

(a) Additional Responsibilities of Chair of Council of Inspectors General on Integrity and Efficiency.—Upon the commencement or designation of a military operation as an overseas contingency operation that exceeds 60 days, the Chair of the Council of Inspectors General on Integrity and Efficiency shall, in consultation with the members of the Council, have the additional responsibilities specified in subsection (b) with respect to the Inspectors General specified in subsection (c).

(b) Specific Responsibilities.—The responsibilities specified in this subsection are the following:

(1) In consultation with the Inspectors General specified in subsection (c), to designate a lead Inspector General in accordance with subsection (d) to discharge the authorities of the lead Inspector General for the overseas contingency operation concerned as set forth in subsection (d).

(2) To resolve conflicts of jurisdiction among the Inspectors General specified in subsection (c) on investigations, inspections, and audits with respect to such contingency operation in accordance with subsection (d)(2)(B).

(3) To assist in identifying for the lead inspector general for such contingency operation, Inspectors General and inspector general office personnel available to assist the lead Inspector General and the other Inspectors General specified in subsection (c) on matters relating to such contingency operation.

(c) Inspectors General.—The Inspectors General specified in this subsection are the Inspectors General as follows:

(1) The Inspector General of the Department of Defense.

(2) The Inspector General of the Department of State.

(3) The Inspector General of the United States Agency for International Development.

(d) Lead Inspector General for Overseas Contingency Operation.—

(1) A lead Inspector General for an overseas contingency operation shall be designated by the Chair of the Council of Inspectors General on Integrity and Efficiency under subsection (b)(1) not later than 30

days after the commencement or designation of the military operation concerned as an overseas contingency operation that exceeds 60 days. The lead Inspector General for a contingency operation shall be designated from among the Inspectors General specified in subsection (c).

(2) The lead Inspector General for an overseas contingency operation shall have the following responsibilities:

(A) To appoint, from among the offices of the other Inspectors General specified in subsection (c), an Inspector General to act as associate Inspector General for the contingency operation who shall act in a coordinating role to assist the lead Inspector General in the discharge of responsibilities under this subsection.

(B) To develop and carry out, in coordination with the offices of the other Inspectors General specified in subsection (c), a joint strategic plan to conduct comprehensive oversight over all aspects of the contingency operation and to ensure through either joint or individual audits, inspections, and investigations, independent and effective oversight of all programs and operations of the Federal Government in support of the contingency operation.

(C) To review and ascertain the accuracy of information provided by Federal agencies relating to obligations and expenditures, costs of programs and projects, accountability of funds, and the award and execution of major contracts, grants, and agreements in support of the contingency operation.

(D)

(i) If none of the Inspectors General specified in subsection (c) has principal jurisdiction over a matter with respect to the contingency operation, to exercise responsibility for discharging oversight responsibilities in accordance with this Act with respect to such matter.

(ii) If more than one of the Inspectors General specified in subsection (c) has jurisdiction over a matter with respect to the contingency operation, to determine principal jurisdiction for discharging oversight responsibilities in accordance with this Act with respect to such matter.

(E) To employ, or authorize the employment by the other

Inspectors General specified in subsection (c), on a temporary basis using the authorities in section 3161 of title 5, United States Code, such auditors, investigators, and other personnel as the lead Inspector General considers appropriate to assist the lead Inspector General and such other Inspectors General on matters relating to the contingency operation.

(F) To submit to Congress on a bi-annual basis, and to make available on an Internet website available to the public, a report on the activities of the lead Inspector General and the other Inspectors General specified in subsection (c) with respect to the contingency operation, including—

(i) the status and results of investigations, inspections, and audits and of referrals to the Department of Justice; and

(ii) overall plans for the review of the contingency operation by inspectors general, including plans for investigations, inspections, and audits.

(G) To submit to Congress on a quarterly basis, and to make available on an Internet website available to the public, a report on the contingency operation.

(H) To carry out such other responsibilities relating to the coordination and efficient and effective discharge by the Inspectors General specified in subsection (c) of duties relating to the contingency operation as the lead Inspector General shall specify.

(3)

(A) The lead Inspector General for an overseas contingency operation may employ, or authorize the employment by the other Inspectors General specified in subsection (c) of, annuitants covered by section 9902(g) of title 5, United States Code, for purposes of assisting the lead Inspector General in discharging responsibilities under this subsection with respect to the contingency operation.

(B) The employment of annuitants under this paragraph shall be subject to the provisions of section 9902(g) of title 5, United States Code, as if the lead Inspector General concerned was the Department of Defense.

(C) The period of employment of an annuitant under this

paragraph may not exceed three years, except that the period may be extended for up to an additional two years in accordance with the regulations prescribed pursuant to section 3161(b)(2) of title 5, United States Code.

(4) The lead Inspector General for an overseas contingency operation shall discharge the responsibilities for the contingency operation under this subsection in a manner consistent with the authorities and requirements of this Act generally and the authorities and requirements applicable to the Inspectors General specified in subsection (c) under this Act.

(e) Sunset for Particular Contingency Operations.—The requirements and authorities of this section with respect to an overseas contingency operation shall cease at the end of the first fiscal year after the commencement or designation of the contingency operation in which the total amount appropriated for the contingency operation is less than \$100,000,000.

(f) Construction of Authority.—Nothing in this section shall be construed to limit the ability of the Inspectors General specified in subsection (c) to enter into agreements to conduct joint audits, inspections, or investigations in the exercise of their oversight responsibilities in accordance with this Act with respect to overseas contingency operations.

(Pub. L. 95–452, §8L, as added Pub. L. 112–239, div. A, title VIII, §848(2), Jan. 2, 2013, 126 Stat. 1851.)

APPENDIX B: TIMELINE

TIMELINE OF EVENTS

DECEMBER 2013

December 28 Retrospective studies indicated that the first EVD victim died in an area close to where Guinea shares a border with northern Liberia.⁵⁴⁷

JANUARY 2014

January 24 Local health officials traveled to Meliandou, Guinea, to investigate cases of severe diarrhea with a rapidly fatal outcome. They suspected the unknown disease was cholera.⁵⁴⁸

FEBRUARY 2014

February 1 Virus reached the Guinean capital, Conakry.⁵⁴⁹

February 13 WHO, Food and Agriculture Organization of the UN, World Organisation for Animal Health, the U.S. Government, and 28 other countries launched the GHSA.⁵⁵⁰

MARCH 2014

March 13 Guinean MOH issued an alert concerning the spread of an unidentified disease.⁵⁵¹

March 23 WHO announced EVD outbreak in Guinea after laboratory tests confirmed that the hemorrhagic fever outbreak was caused by the Ebola virus.⁵⁵²

March 26 Suspected EVD cases reported in Liberia and Sierra Leone.⁵⁵³

March 28 WHO Global Outbreak Alert and Response Network team, including CDC members, travelled to Guinea.⁵⁵⁴

March 30 Liberia confirmed first EVD cases.⁵⁵⁵

APPENDIX B: TIMELINE

MAY 2014

May 24 Sierra Leone confirmed first EVD case.⁵⁵⁶

JUNE 2014

June 23 MSF declared Ebola outbreak “out of control” and requested massive deployment of resources by governments and aid organizations to control the epidemic.⁵⁵⁷

JULY 2014

July 9 CDC activated its EOC for the Ebola response.⁵⁵⁸

July 23 Nigeria reported first EVD case.⁵⁵⁹

July 31 CDC issued a travel warning to U.S. residents to avoid nonessential travel to Guinea, Liberia, and Sierra Leone.⁵⁶⁰

July 31 WHO released an Ebola Virus Disease Outbreak Response Plan.⁵⁶¹

AUGUST 2014

August 2 An American doctor who had been working as a missionary physician in Liberia was flown to Atlanta, GA, for treatment after contracting EVD.⁵⁶²

August 4 U.S. Ambassador to Liberia declared the EVD outbreak in Liberia a disaster.⁵⁶³

August 5 U.S. Government deployed USAID-led DART to the region.⁵⁶⁴ USAID constituted an RMT and DoD established international Ebola task force in Washington, D.C.⁵⁶⁵

August 8 WHO declared EVD outbreak in West Africa a “public health emergency of international concern.”⁵⁶⁶

August 13 The Chargé d’Affaires in Sierra Leone declared the EVD outbreak in Sierra Leone a disaster.⁵⁶⁷

APPENDIX B: TIMELINE

- August 15 The Chargé d’Affaires in Guinea declared the EVD outbreak in Guinea a disaster.⁵⁶⁸
- August 18 WHO requested that EVD-affected countries conduct exit screenings of all individuals.⁵⁶⁹
- August 28 WHO published the Ebola Response Roadmap, which outlined the roles and responsibilities of governments and organizations involved in the effort to combat EVD in West Africa.⁵⁷⁰
- August 29 Senegal reported first EVD case.⁵⁷¹

SEPTEMBER 2014

- September 6 The Secretary of Defense approved DoD support for a DOS request to provide an expeditionary hospital in West Africa as a healthcare worker EVD treatment facility.⁵⁷²
- September 9 Liberian President appealed for urgent aid in a letter to the U.S. President.⁵⁷³
- September 15 The Chairman of the Joint Chiefs of Staff issued an order to identify DoD elements to support the U.S. Government response to the Ebola epidemic occurring in West Africa under OUA.⁵⁷⁴
- September 16 The President announced the U.S. Government’s strategy for responding to EVD outbreak in West Africa, including military support through OUA.⁵⁷⁵
- September 18 UN Security Council declared the EVD outbreak in West Africa a “threat to international security and peace” and called for nations to assist with the response efforts.⁵⁷⁶ The UN established UNMEER to improve international response coordination.⁵⁷⁷
- September 26 CDC estimated between 550,000 and 1.4 million people in West Africa could be infected by January 2015 if there were no additional interventions or changes in social behavior.⁵⁷⁸
- September 28 DoD delivered 25-bed hospital and two mobile labs to Monrovia, Liberia.⁵⁷⁹

APPENDIX B: TIMELINE

- September 30 First travel-associated case of Ebola reported in the United States.⁵⁸⁰

OCTOBER 2014

- October 5 DoD established Ebola response cargo hub in Senegal to funnel humanitarian supplies and equipment into West Africa.⁵⁸¹
- October 8 First EVD patient diagnosed in the United States dies.⁵⁸²
- October 9 The first person-to-person EVD transmission outside Africa occurred in Spain.⁵⁸³
- October 10 An American nurse tested positive for EVD after caring for an EVD-positive man who had traveled from Liberia to Texas while asymptomatic.⁵⁸⁴
- October 11 Enhanced U.S. entry screening program started at five international U.S. airports for travelers from Guinea, Liberia, and Sierra Leone.⁵⁸⁵
- October 16 The President issued an Executive Order to authorize the Secretary of Defense to order reserve units and individuals to active duty to support OUA.⁵⁸⁶
- October 17 Senegal’s EVD outbreak declared over.⁵⁸⁷
- October 20 Nigeria declared EVD-free.⁵⁸⁸
- October 23 Mali reported its first case of EVD.⁵⁸⁹

NOVEMBER 2014

- November 10 First ETU, the Monrovia Medical Unit or MMU, built and staffed by the U.S. Government opened in Liberia.⁵⁹⁰
- November 13 The Secretary of Defense ordered the mobilization of reservists to support OUA.⁵⁹¹
- November 25 The Secretary of the Army approved mobilization orders for reservists.⁵⁹²

APPENDIX B: TIMELINE

DECEMBER 2014

December 16 The President signed the Consolidated and Further Continuing Appropriations Act, 2015 (P.L. 113-235), which provided for \$3.726 billion in funds for international efforts to combat Ebola with an additional \$532 million for use in either domestic or international settings.⁵⁹³

JANUARY 2015

January 18 Mali declared EVD-free.⁵⁹⁴

January 25 The President approved a plan to transition OUA support activities to civilian responders and international organizations in Liberia.⁵⁹⁵

FEBRUARY 2015

February 2 The White House announced that the U.S. Government response had shifted from efforts designed to turn the tide on the EVD epidemic to eliminating all cases of the disease from West Africa.⁵⁹⁶

February 2 The first major Ebola vaccine trials launched in Liberia as part of a Liberia-U.S. partnership (PREVAIL).⁵⁹⁷

APRIL 2015

April 17 Guinea, Liberia, and Sierra Leone unveiled Ebola recovery plans.⁵⁹⁸

April 30 Monrovia Medical Unit closed.⁵⁹⁹

MAY 2015

May 4 CDC revised its travel notice for Liberia, no longer recommending that U.S. residents avoid nonessential travel to the country.⁶⁰⁰

May 9 Liberia declared free of EVD transmission.⁶⁰¹

APPENDIX B: TIMELINE

May 23 World Health Assembly approved structural reforms to WHO's emergency response program.⁶⁰²

JUNE 2015

June 16 The Government of Sierra Leone launched Operation Northern Push, a surge operation to halt EVD cases in the country's northern districts.⁶⁰³

June 29 Liberia confirmed new EVD case.⁶⁰⁴

June 30 OUA terminated.⁶⁰⁵

JULY 2015

July 6 The Government of Sierra Leone announced 90-day extension of Operation Northern Push.⁶⁰⁶

July 10 UN hosted an international pledging conference to assist Guinea, Liberia, and Sierra Leone with recovery efforts. The U.S. Government pledged \$266 million at the conference.⁶⁰⁷

July 26 Interim results indicated that the Vesicular Stomatitis Virus-Ebola Virus (VSV-EBOV) vaccine delivered via ring vaccination strategy may be effective against the disease.⁶⁰⁸

July 31 UNMEER officially closed. WHO assumed lead responsibility for the UN's EVD emergency response.⁶⁰⁹

AUGUST 2015

August 16 Sierra Leone recorded its first week without any new confirmed EVD cases since the beginning of the outbreak.⁶¹⁰

August 29 Sierra Leone confirmed a new EVD case.⁶¹¹

SEPTEMBER 2015

September 3 WHO declared the end of the EVD outbreak in Liberia for the second time.⁶¹²

APPENDIX B: TIMELINE

- September 13 Guinea recorded its first EVD-free week in over 12 months.⁶¹³
- September 16 Guinea confirmed new EVD case.⁶¹⁴
- September 21 CDC discontinued enhanced entry screening for travelers arriving in the United States from Liberia, although travelers continued to undergo exit screening before departing Liberia.⁶¹⁵
- September 28 Start of the first week with zero confirmed EVD cases in West Africa since March 2014.⁶¹⁶
- September 28 The Government of Guinea launched Operation Porte-a-Porte in the capital, Conakry, to find EVD cases, engage with communities, and strengthen infection prevention and control capacity in health facilities.⁶¹⁷

APPENDIX C: COMPONENTS

U.S. GOVERNMENT COMPONENTS WITH A RESPONSE, RECOVERY, AND PREPAREDNESS ROLE

Within the U.S. Government, USAID, HHS, DoD, and DOS and have all contributed to efforts to combat the Ebola outbreak outside U.S. borders. The following paragraphs provide information on the organizational components of the departments and agencies with a role in this effort.

U.S. AGENCY FOR INTERNATIONAL DEVELOPMENT

USAID is an independent federal agency with programs and activities in more than 100 countries designed to end extreme poverty and promote resilient, democratic societies while advancing U.S. security and prosperity.⁶¹⁸ USAID is the lead federal agency for providing humanitarian assistance in response to international crises and disasters and was designated the lead federal agency to manage and coordinate the U.S. effort to fight the Ebola outbreak abroad.⁶¹⁹ Although many USAID components have had a role in Ebola-related activities, the following units have been primarily involved in those efforts.

EBOLA SECRETARIAT

USAID relied on an Ebola Secretariat during the peak of the response effort to coordinate efforts across the four pillars of the U.S. Government EVD response strategy.⁶²⁰ As the response effort declined in intensity, the Ebola Secretariat was dissolved on May 26, 2015.⁶²¹ Its coordination functions within USAID were assumed by the Africa Ebola Unit described further below.

BUREAU FOR AFRICA

USAID operates 27 regional and bilateral missions in Africa under the management of USAID's Bureau for Africa.⁶²² The Africa Bureau consists of eight offices that support USAID missions in Sub-Saharan Africa. USAID missions in Guinea, Liberia, Senegal, Ghana, and Mali have provided coordination and support for U.S. Government efforts to fight Ebola in their respective countries. USAID does not have a mission in Sierra Leone, but the USAID mission in Guinea has personnel based in Sierra Leone to oversee programs there.⁶²³

Africa Ebola Unit

The Africa Bureau established AEU on March 18, 2015, to oversee implementation of Pillar II activities to mitigate the second-order effects

stemming from the EVD outbreak. In addition, AEU assumed the coordinating functions of the Ebola Secretariat in May 2015. AEU is directly responsible for overseeing governance and economic crisis mitigation efforts under Pillar II.⁶²⁴

BUREAU FOR FOOD SECURITY

The Bureau for Food Security works to bolster and strengthen public and private institutions that support the growth of agriculture in countries around the world. The Bureau was created in 2010 to manage the President's Feed the Future initiative in addition to traditional agricultural programs.⁶²⁵ The Bureau supports private sector partnerships to revitalize agricultural sectors and livelihoods affected by the Ebola outbreak in West Africa through the Feed the Future initiative.⁶²⁶

BUREAU FOR DEMOCRACY, CONFLICT, AND HUMANITARIAN ASSISTANCE

Office of Food for Peace

FFP works to alleviate hunger and save lives by providing emergency food assistance to communities affected by conflict and natural disaster, and development assistance to address the primary sources of food insecurity.⁶²⁷ An office within USAID's Bureau for Democracy, Conflict, and Humanitarian Assistance, FFP also coordinates relief and development efforts to ensure that humanitarian assistance efforts produce long-term benefits for local communities.⁶²⁸ In response to the EVD outbreak, FFP focused its activities on restoring food production and consumption in West Africa to pre-EVD levels.⁶²⁹ FFP has supported activities such as the distribution of food aid, market research and recovery efforts, and food security monitoring activities throughout West Africa.⁶³⁰

Office of U.S. Foreign Disaster Assistance

An office within the Bureau for Democracy, Conflict, and Humanitarian Assistance, OFDA is responsible for providing emergency, non-food humanitarian assistance in response to international crises and disasters. Additionally, OFDA is responsible for international disaster risk reduction, resilience, and coordination efforts, and for devising, coordinating, and implementing strategies for responding to disasters. USAID DARTs operate under its purview.

Disaster Assistance Response Teams

DARTs consist of humanitarian experts and technical advisors who assess a crisis firsthand, identify the most urgent needs, and coordinate the U.S. Government response. USAID has operated a regional DART team

in Guinea, Liberia, and Sierra Leone since August 2014. The DART is responsible for planning, operations, logistics, and administration relating to the U.S. interagency Ebola response effort.⁶³¹

Response Management Team

RMTs are Washington, D.C.-based units activated in response to international disasters that manage disaster response strategy and planning activities, liaising with other U.S. Government agencies so that DARTs can focus on providing assistance in the field.

U.S. GLOBAL DEVELOPMENT LAB

The Global Development Lab is an organization within USAID designed to bring together and coordinate the efforts of different partner organizations to find new and innovative solutions to development challenges.⁶³² The Lab's role in Ebola response and recovery efforts has focused on enhancing communications and information systems in affected countries, as well as increasing engagement with private sector partners and facilitating the use of geospatial information systems and open innovation approaches in response, recovery, and resilience planning.⁶³³

GLOBAL HEALTH BUREAU

USAID's Global Health Bureau is responsible for supporting field health programs and research and innovation to advance international health objectives, and for coordinating with other donors to transfer new health technologies to the field. The Bureau has contributed staff to the Ebola Secretariat, RMT, and DART for the Ebola outbreak.⁶³⁴ Additionally, the Bureau established the Global Health Ebola Team on May 8, 2015, to coordinate and manage response and recovery efforts in the three most affected countries in West Africa.⁶³⁵ Bureau-sponsored activities include work to restore non-Ebola related health services and assist countries in preventing and preparing for a potential EVD outbreak within their borders.⁶³⁶ The Bureau's Emerging Pandemic Threats program supports global health security efforts to detect new disease threats early, enhance national preparedness and response capacities, and reduce risky practices and behaviors that can trigger the emergence of new diseases.⁶³⁷

DEPARTMENT OF DEFENSE

DoD played a key supporting role in efforts to control and reverse the Ebola outbreak in West Africa. During the outbreak response, DoD established the Ebola Task Force and the Ebola Outbreak Working Group

to provide regular communication across the combatant commands, other EVD response entities within DoD, and stakeholders across the department.⁶³⁸

On September 6, 2014, the Secretary of Defense approved DoD support for a DOS request to provide an expeditionary hospital in West Africa as a healthcare worker EVD treatment facility.⁶³⁹ DoD declared the expanding effort an operation, naming it Operation United Assistance. Under OUA, DoD was authorized to provide direct support to the lead U.S. agency for response efforts, USAID.⁶⁴⁰ While OUA formally concluded on June 30, 2015,⁶⁴¹ DoD continued to support Ebola response efforts through the work of DARPA and DTRA, which have focused on promoting the development of new drugs and approaches for treating EVD.

ARMED FORCES HEALTH SURVEILLANCE CENTER

AFHSC provides comprehensive health surveillance as part of its efforts to safeguard the health of military and military-associated populations. In Liberia, AFHSC has supported collaboration between the Armed Forces of Liberia, the Liberia Institute for Biomedical Research, and the U.S. Naval and Medical Research Unit since 2010. During the EVD outbreak, AFHSC-supported laboratories in Liberia provided assistance with diagnostic testing.⁶⁴² AFHSC also works with host nations and partners to improve diagnostic and reporting capacity in accordance with GHSA and IHR guidelines.⁶⁴³

DEFENSE THREAT REDUCTION AGENCY

DTRA has a focus on combating weapons of mass destruction by identifying, monitoring, and destroying weapons and weapons-related materials, and researching and developing tools and capabilities to counter current and future threats from weapons of mass destruction.⁶⁴⁴ Since the Ebola virus is categorized as a potential biological threat agent, DTRA has supported EVD response efforts by providing transportable labs, equipment, and material to EVD-affected countries; worked with partner nations to improve biosafety and biosecurity; and supported research and development of medical countermeasures for Ebola.⁶⁴⁵

DEPARTMENT OF HEALTH AND HUMAN SERVICES

HHS is the primary federal department responsible for the health of American citizens and delivery of essential services. Several HHS agencies have had a significant role in the U.S. Government's response to the EVD outbreak in West Africa. In particular, CDC, FDA, NIH, ASPR, and USPHS have all played a part in this effort.

CENTERS FOR DISEASE CONTROL AND PREVENTION

CDC is responsible for maintaining the nation's health security. To this end, CDC conducts critical science and provides guidance to protect against major health threats.⁶⁴⁶ CDC is the medical response and public health lead for the U.S. Government Ebola response.⁶⁴⁷ CDC has coordinated operations and logistics in support of EVD response efforts through its EOC, and supported EVD response needs at home and abroad. CDC continues to monitor and respond to the EVD outbreak and remains a primary agency in the U.S. Government's effort to end the outbreak. CDC is also supporting GHSA by assisting in the coordination and development of 5-year plans for Guinea, Liberia, and Sierra Leone to strengthen their capacity to prevent, detect, and respond to infectious diseases.⁶⁴⁸

FOOD AND DRUG ADMINISTRATION

FDA works to protect public health by regulating the quality and safety of food, tobacco, and medical products. In the effort to combat EVD, FDA established an Ebola Task Force to coordinate medical product development and availability with other agencies. FDA has also worked to promote development and production of EVD-related vaccines, therapies, and diagnostic tools.⁶⁴⁹

NATIONAL INSTITUTES OF HEALTH

NIH is the U.S. Government's primary medical research agency.⁶⁵⁰ Within NIH, the NIAID supports basic, applied, and clinical research to develop diagnostics, therapeutics, and vaccines for infectious diseases, including viral hemorrhagic fevers like EVD. In the effort to combat EVD, NIAID has supported the study of how EVD causes illness in animals and people and worked to address the disease by developing new diagnostics, vaccines, and treatments.

OFFICE OF THE ASSISTANT SECRETARY FOR PREPAREDNESS AND RESPONSE

ASPR serves as HHS's principal advisor on issues related to bioterrorism and the department's preparedness, response, and recovery portfolio, and is the U.S. Government's public health and medical preparedness and response policy coordinator.⁶⁵¹ ASPR was the principal coordinator for HHS EVD response efforts and, in conjunction with CDC, supported the development of new Ebola drugs, and advised the healthcare workforce on proper EVD care precautions and case management techniques.⁶⁵² Additionally, ASPR's BARDA supported the development and procurement of medical countermeasures for EVD, such as vaccines and new diagnostic equipment.⁶⁵³

APPENDIX C: COMPONENTS

U.S. PUBLIC HEALTH SERVICE

Composed of uniformed service men and women, USPHS's Commissioned Corps is a team of more than 6,000 public health professionals who serve within various U.S. Government agencies as both public health officials and clinical specialists.⁶⁵⁴ The USPHS Commissioned Corps responded to the EVD outbreak in West Africa by deploying members to the region to support the work of several U.S. Government agencies.⁶⁵⁵ At the height of the response effort, USPHS also established an Ebola Response Task Force to coordinate response efforts.⁶⁵⁶

DEPARTMENT OF STATE

The DOS response to EVD has involved headquarters components and U.S. embassies in West Africa. During the outbreak, DOS established a dedicated unit, the Ebola Coordination Unit, to coordinate its response activities.⁶⁵⁷ The Ebola Coordination Unit ceased operating on March 30, 2015; thereafter, DOS's EVD response efforts were managed by individual bureaus and offices within the Department.⁶⁵⁸ Embassies in Liberia, Sierra Leone, Guinea, Mali, and Senegal all reportedly participated in outbreak response efforts by increasing staff to assist national Governments and hosting representatives from the international community and other U.S. Government agencies involved in response efforts.⁶⁵⁹ DOS has provided medical evacuations of U.S. Government personnel operating in the region, and worked in the region to improve biosecurity, disease surveillance, and infectious disease response capabilities through its Biosecurity Engagement Program.⁶⁶⁰

OFFICE OF COOPERATIVE THREAT REDUCTION

CTR's global threat reduction program aims to reduce threats from terrorists or other non-state actors in association with the acquisition of expertise, material, or equipment that could be used to develop a weapon of mass destruction. As the Ebola virus is categorized as a potential biological threat agent, CTR has used its pathogen security and biorisk management expertise to support control efforts in West Africa and fortify global health security infrastructure.⁶⁶¹

APPENDIX D: USAID PROGRAMS

USAID EBOLA-RELATED PROGRAMS BY PILLAR AND GEOGRAPHICAL FOCUS AS OF SEPTEMBER 30, 2015 (UNAUDITED)

The table contains Ebola response and preparedness program information provided by USAID. In addition to information regarding the strategic and geographic focus of program activities, it includes information on the USAID unit associated with the program, available program description information, and data on amounts that USAID has committed and obligated to particular programs and activities. USAID-funded programs that concluded before September 30, 2015, are not included, nor are programs for which complete award and period of performance information were unavailable. Pillar III activities are not associated with independent programs and are implemented by units within USAID. These activities are not included in the table as a result.

USAID Bureau/Office	Program Description [†]	Implementing Partner	Committed (\$) [‡]	Obligated (\$) [‡]	Period of Performance [§]	
					Start Date	End Date
Pillar I: Control the Outbreak						
Regional						
OFDA	Fund third-party study of the international Ebola outbreak and response	Overseas Development Institute	30,011	30,011	6/28/2013	6/28/2016
OFDA	Support for research study on disinfection to prevent Ebola transmission	Tufts University	558,504	558,504	6/1/2015	6/1/2016
Guinea						
OFDA	Support sanitation and hygiene activities, including the provision of 900,000 soap bars to 50,000 households that received hand-washing devices, social mobilization and building community awareness to improve hygiene practices, contact tracing, and surveillance activities	Center for International Studies and Cooperation	1,404,928	1,404,928	7/30/2015	1/29/2016
OFDA	Support community response planning for future EVD outbreaks in lower Guinea through risk management and WASH activities	DRC Emergency Services	750,000	750,000	8/15/2015	3/31/2016
OFDA	Equip and staff Ebola transit center in Forecariah, Guinea	French Red Cross	4,505,445	4,505,445	12/1/2014	12/31/2015
OFDA	Collaborate with the EOC, MOH, and other stakeholders to reorient the overall Ebola communication and social mobilization strategy, and work with communities on Ebola messaging and dissemination	HC3	1,000,000	1,000,000	4/1/2015	12/31/2015

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USAID Bureau/Office	Program Description†	Implementing Partner	Committed (\$) [‡]	Obligated (\$) [‡]	Period of Performance [§]	
					Start Date	End Date
OFDA	Support social mobilization activities with community radio stations to organize radio broadcasts to inform and sensitize the population about Ebola and contact tracing activities	HKI	1,719,455	1,719,455	12/1/2014	11/30/2015
OFDA	Provide support for safe burials, social mobilization, and training of Ebola response workers	IFRC	3,000,000	3,000,000	9/26/2014	12/31/2015
OFDA	Deploy and support 100 volunteers for safe burials, manage waste at isolation centres, procure and pre-position PPE kits, train volunteers on the use of PPEs, train 60 supervisors and 1,250 volunteers on EVD signs and symptoms, prevention measures and referral mechanisms	IFRC	1,000,000	1,000,000	9/26/2014	12/31/2015
OFDA	Support IFRC activities, including the establishment of IFRC regional Ebola coordination hub in Conakry and IFRC Ebola coordinator	IFRC	1,000,000	1,000,000	9/26/2014	12/31/2015
OFDA	Support screening and referral units at 10 hospitals, including supplies and IPC training for all hospital staff, and psychosocial support for EVD-affected communities	IMC	14,854,760	14,854,760	2/1/2015	1/31/2016
OFDA	Support production of daily radio show in five languages and expand geographical reach to additional audiences in border areas with Ebola-related messages	Internews	1,200,000	1,200,000	10/17/2014	4/15/2016
OFDA	Provide training for radio journalists and local media on how to report on the humanitarian response to the Ebola outbreak	Internews	799,846	799,846	10/17/2014	4/15/2016

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USAID Bureau/Office	Program Description†	Implementing Partner	Committed (\$) [‡]	Obligated (\$) [‡]	Period of Performance [§]	
					Start Date	End Date
OFDA	Construct and support 18 provincial EOCs to strengthen command and control of the Ebola response	IOM	3,492,220	3,492,220	12/19/2014	1/15/2016
OFDA	Rehabilitate and equip provincial EOCs in Guinea	IOM	2,000,000	2,000,000	12/19/2014	1/15/2016
OFDA	Support reconstruction and provide logistics expertise to retrofit up to three additional provincial EOCs	IOM	300,000	300,000	12/19/2014	1/15/2016
OFDA	Support NGOs to build the capacity and resilience of Guinean communities throughout EVD prevention, response and recovery phases	IOM	1,500,000	1,500,000	5/1/2015	1/31/2016
OFDA	Manage disease surveillance activities along the Guinean borders with Liberia and Sierra Leone, including alert, case management and referral mechanisms	IOM	5,475,000	5,475,000	5/22/2015	2/29/2016
OFDA	Increase and improve IPC activities at healthcare facilities and maintain health services	Jhpiego	2,400,000	2,400,000	4/17/2015	9/30/2015
OFDA	Provide IPC training for health workers, distribute IPC kits at health facilities, and at community level, provide hygiene promotion knowledge and case detection skills	Premiere Urgence	1,295,000	1,295,000	9/1/2015	6/30/2016
OFDA	Increase community awareness and ability to conduct contact tracing, active surveillance, and infection control activities	Relief International	4,000,000	4,000,000	11/10/2014	9/30/2015
OFDA	Provide hygiene behaviour and health promotion activities to vulnerable populations in Ebola affected areas	Terre Des Hommes	875,000	875,000	12/15/2014	11/30/2015
OFDA	Ensure availability of hand washing kits in schools in 18 prefectures	UNICEF	4,555,047	4,555,047	3/20/2015	12/31/2015

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USAID Bureau/ Office	Program Description†	Implementing Partner	Committed (\$) [‡]	Obligated (\$) [‡]	Period of Performance [§]	
					Start Date	End Date
OFDA	Provide protective environment for orphans and children affected by Ebola, psychosocial support to EVD affected families and communities, and social mobilization activities	UNICEF	5,000,400	5,000,400	3/20/2015	12/31/2015
OFDA	Provide logistics and supply chain capabilities to UNMEER, and provide of humanitarian air services and strategic airlift via UN Humanitarian Air Service (UNHAS)	UNWFP	6,000,000	6,000,000	11/12/2014	12/31/2016
OFDA	Build two ETUs	UNWFP	1,500,000	1,500,000	11/12/2014	12/31/2016
OFDA	Establish a logistics staging area in Ghana, national hubs in the capitals of Guinea, Liberia, and Sierra Leone, and forward logistics bases in affected countries	UNWFP	1,000,000	1,000,000	11/12/2014	12/31/2016
OFDA	Promote healthcare worker training and adequate PPE supplies to health facilities in 10 prefectures	UNWHO	19,626,849	19,626,849	4/1/2015	2/28/2016
Liberia						
OFDA	Cost modification for ETU support and decommissioning activities, and support for health facilities in Lofa, Liberia	GOAL	2,578,833	2,578,833	11/1/2014	12/31/2015
OFDA	Support for clinical and non-clinical management of ETU in River Gee County, Liberia	ARC	7,633,633	7,633,633	11/1/2014	12/31/2015
OFDA	Establish and manage 10 community care centers (CCCs)	CONCERN	6,806,343	6,806,343	11/1/2014	12/31/2015
OFDA	Rehabilitate and construct 7 CCCs within the Catholic Church's health-supported facilities in the Archdiocese of Monrovia	CRS	960,447	960,447	10/20/2014	12/31/2015
OFDA	Deploy USPHS personnel to provide treatment services at the MMU	DHHS	128,740	128,740	10/14/2014	10/13/2015
OFDA	Deploy USPHS personnel to staff MMU for the first two-month rotation	DHHS	1,759,532	1,759,532	10/14/2014	10/13/2015

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USAID Bureau/ Office	Program Description†	Implementing Partner	Committed (\$) [‡]	Obligated (\$) [‡]	Period of Performance [§]	
					Start Date	End Date
OFDA	Fund USPHS support to the MMU	DHHS	1,800,000	1,800,000	10/14/2014	10/13/2015
OFDA	Support social mobilization, case detection, and case management activities, and scale up cross-border coordination	GC/CHF	11,307,759	11,307,759	8/13/2014	10/21/2015
OFDA	Expand burial and disinfection teams in all 15 counties	GC/CHF	9,526,481	9,526,481	8/13/2014	10/21/2015
OFDA	Expand safe burial support in the most-affected counties, scale up outreach activities to communities, and develop safe burial ground in Montserado County	GC/CHF	3,501,517	3,501,517	8/13/2014	10/21/2015
OFDA	Manage Voinjama ETU and Voinjama's Tellewoyan Hospital triage area	GOAL	4,702,667	4,702,667	11/1/2014	12/31/2015
OFDA	Operate ETU in Bong County and improve screening, isolation, and referral at regular health facilities	IMC	7,824,351	7,824,351	8/29/2014	12/31/2015
OFDA	Operate Bong ETU for 8 months and Margibi ETU for 6 months	IMC	8,832,894	8,832,894	8/29/2014	12/31/2015
OFDA	Train and mentor county health teams to develop capacity to respond to the reemergence of Ebola while strengthening health worker skills in the treatment of other infectious diseases	IMC	3,027,822	3,027,822	10/8/2014	12/31/2015
OFDA	Support comprehensive training for Ebola response workers, including instruction for healthcare workers and response actors in operating ETUs	IMC	5,934,800	5,934,800	10/8/2014	12/31/2015
OFDA	Enhance screening and surveillance capacity at borders and in border communities in Liberia	IOM	6,143,897	6,143,897	7/1/2015	6/30/2016

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USAID Bureau/ Office	Program Description†	Implementing Partner	Committed (\$)‡	Obligated (\$)‡	Period of Performance§	
					Start Date	End Date
OFDA	Support the operation of ETU and incident management system	IOM	4,829,095	4,829,095	9/15/2014	12/31/2015
OFDA	Provide clinical management in ETUs, with support for clinical care in up to 17 ETUs as needed	IOM	28,048,894	28,048,894	9/15/2014	12/31/2015
OFDA	Expand and modify activities by the Montserrado Consortium, including enhanced surveillance and response capacity and efforts to reduce stress and stigma for Ebola-affected families	IRC	4,175,562	4,175,562	9/1/2014	12/31/2015
OFDA	Support for response organizations in Montserrado County, including contact tracing, emergency dispatch, dead body removal, and IPC monitoring visits	IRC	4,093,690	4,093,690	9/1/2014	12/31/2015
OFDA	Provide clinical care to EVD patients in Monrovia	IRC	10,402,487	10,402,487	10/1/2014	12/31/2015
OFDA	Restore access to gender-based violence services in Montserrado, Lofa, and Nimba in the context of the Ebola response	IRC	978,397	978,397	4/1/2015	10/31/2015
OFDA	Train healthcare workers in IPC best practices and provide continuous supportive supervision	Jhpiego	2,814,287	2,814,287	12/9/2014	12/8/2015
OFDA	Improve IPC practices through training and supportive supervision, distribute supplies and commodities, and strengthen the capacity of health actors to sustain activities	John Snow Inc.	4,068,933	4,068,933	11/6/2014	12/30/2015
OFDA	Support IPC training for non-ETU healthcare workers and provision of PPEs and supplies to health facilities	John Snow Inc.	3,164,720	3,164,720	11/6/2014	12/30/2015
OFDA	Support activities that build rapid response capacity at the county level, including IPC preparedness, triage and isolation, and EVD surveillance	Medical Teams International	681,065	681,065	12/15/2014	12/31/2015

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USAID Bureau/ Office	Program Description†	Implementing Partner	Committed (\$)‡	Obligated (\$)‡	Period of Performance§	
					Start Date	End Date
OFDA	Support for rapid isolation and treatment of Ebola in Bomi, Sinoe, Grand Cape Mount counties	Medical Teams International	4,021,836	4,021,836	12/15/2014	12/31/2015
OFDA	Support for IPC and waste management training for primary healthcare facilities	MENTOR	2,327,902	2,327,902	10/10/2014	12/31/2015
OFDA	Support for emergency infection control and case management assistance for slum communities	MENTOR	1,598,314	1,598,314	10/10/2014	12/31/2015
OFDA	Build public awareness of Ebola and other preventable diseases through grassroots social mobilization effort that engages civil society actors	Mercy Corps	12,000,000	12,000,000	7/11/2015	7/10/2016
OFDA	Establish and operate an ETU and two CCCs, and train community health workers in contact tracing and surveillance activities in Grand Gedeh	Partners in Health	11,277,896	11,277,896	10/15/2014	12/31/2015
OFDA	Establish and support ETU in Harper, and provide support for up to four CCCs, mobile rapid case management services, and a network of 260 health workers in Maryland	Partners in Health	13,115,274	13,115,274	10/15/2014	12/31/2015
OFDA	Establish CCCs to provide complementary healthcare services in Montserrado, Bomi, Grand Cape Mount, and Gbarpolu counties	Plan USA	1,508,821	1,508,821	11/7/2014	11/6/2015
OFDA	Construct and manage 10 CCCs in Nimba and Bong, Liberia	Project Concern International	4,128,390	4,128,390	10/29/2014	12/31/2015
OFDA	Operate and manage ETU in Ganta, Nimba County	Project Concern International	5,675,372	5,675,372	12/16/2014	10/14/2015
OFDA	Restore health & WASH services and strengthen community prevention, with a focus on EVD-affected children	SCF/US	2,357,933	2,357,933	9/23/2014	12/16/2015
OFDA	Strengthen county-level response teams, support case management, and strengthen early warning and surveillance activities	UNICEF	5,658,093	5,658,093	8/20/2014	12/31/2015

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USAID Bureau/Office	Program Description†	Implementing Partner	Committed (\$) [‡]	Obligated (\$) [‡]	Period of Performance [§]	
					Start Date	End Date
OFDA	Support the safe management of waste at health facilities and ETUs by improving water disposal and training sanitation staff on maintenance of systems	UNICEF	3,301,560	3,301,560	8/20/2014	12/31/2015
OFDA	Provide medicines and WASH supplies to ETUs and CCCs	UNICEF	38,903,661	38,903,661	12/9/2014	6/30/2016
OFDA	Provide psychosocial and mental health support to EVD-affected children and households caring for EVD-affected children	UNICEF	3,492,720	3,492,720	2/20/2015	11/30/2015
OFDA	Support PPE deployment and provide supply chain management and logistics support for ETUs and CCCs through warehousing, transportation, and inventory tracking and management	UNWFP	12,268,192	12,268,192	10/15/2014	12/31/2015
OFDA	Support PPE deployment and provide supply chain management and logistics support for ETUs and CCCs through warehousing, transportation, and inventory tracking and management	UNWFP	45,008,916	45,008,916	10/15/2014	12/31/2015
OFDA	Support PPE and logistics pipeline, IPC training, county-level surveillance and coordination, transport system for EVD lab samples, and psychosocial activities	UNWHO	35,000,000	35,000,000	3/25/2015	3/31/2016
OFDA	Support outreach activities through social messaging to communities at risk of Ebola exposure	GC/CHF	758,864	758,864	8/13/2014	10/21/2015
OFDA	Support healthcare workers managing Ebola cases and establish burial and disinfection teams	GC/CHF	6,981,744	6,981,744	8/13/2014	10/21/2015
OFDA	Support the operation of ETU in Bong	IMC	4,906,604	4,906,604	8/29/2014	12/31/2015

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USAID Bureau/Office	Program Description†	Implementing Partner	Committed (\$) [‡]	Obligated (\$) [‡]	Period of Performance [§]	
					Start Date	End Date
OFDA	Procure case management equipment, train health workers, restore access to reproductive health services, and strengthen logistical management of supplies	UNICEF	680,333	680,333	8/20/2014	12/31/2015
Mali						
OFDA	Train healthcare workers on IPC and contact tracing in Mali-Guinea border areas	CRS	954,122	954,122	1/2/2015	9/30/2015
OFDA	Support three rapid response teams to screen for suspect EVD cases in Bamako and border areas for four months	IMC	2,000,000	2,000,000	1/1/2015	11/30/2015
OFDA	Support logistics for rapid response teams and community surveillance to identify suspect cases of EVD in mining and border communities	IOM	2,033,983	2,033,983	12/31/2014	9/30/2015
Sierra Leone						
OFDA	Support for rapid response social mobilization activities in Ebola-affected communities in Bombali and Koinadugu districts, Sierra Leone	CRS	548,619	548,619	1/5/2015	10/4/2015
OFDA	Construct temporary isolation units and enhance IPC at 90 peripheral health units (PHUs) in Bombali district, Sierra Leone	GOAL	2,005,780	2,005,780	2/1/2015	10/31/2015
OFDA	Support clinical case management at Kenema ETU, and support community awareness and social mobilization, contact tracing and surveillance activities, provision of psychosocial support, safe and dignified burials, and case management	IFRC	3,500,000	3,500,000	12/5/2014	12/31/2015
OFDA	Manage ETU in Kono ETU and create rapid response capacity to respond to Ebola events in remote communities	IFRC	6,000,000	6,000,000	12/5/2014	12/31/2015
OFDA	Manage two ETUs in Port Loko and Kambia districts, Sierra Leone	IMC	7,772,793	7,772,793	10/1/2014	12/31/2015

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USAID Bureau/ Office	Program Description†	Implementing Partner	Committed (\$) [‡]	Obligated (\$) [‡]	Period of Performance [§]	
					Start Date	End Date
OFDA	Manage ETU and provide psychosocial support and community outreach to Ebola-affected communities in Port Loko district, Sierra Leone	IMC	5,164,183	5,164,183	10/1/2014	12/31/2015
OFDA	Support surveillance and screening activities at land, air, and sea borders to prevent cross-border Ebola transmission in Sierra Leone	IOM	920,000	920,000	6/2/2015	2/29/2016
OFDA	Support IPC training through mobile training unit and health screening system	IOM	900,000	900,000	1/15/2015	12/15/2015
OFDA	Support the distribution of interim care kits with bleach, gloves, and oral rehydration solution to Ebola-affected households	IOM	1,469,410	1,469,410	12/1/2014	12/31/2015
OFDA	Support social mobilization activities, active case-finding, and cultural burial team in Bombali and Kono Districts, Sierra Leone	IOM	1,000,000	1,000,000	1/15/2015	10/15/2015
OFDA	Train workers in Ebola screening and treatment at Ebola and non-Ebola healthcare facilities	IOM	1,000,000	1,000,000	1/15/2015	12/15/2015
OFDA	Support surveillance and screening activities at land, air, and sea borders to prevent cross-border Ebola transmission in Sierra Leone	IOM	1,310,000	1,310,000	6/2/2015	2/29/2016
OFDA	Support community-level surveillance and investigation of possible Ebola events in nine districts in Sierra Leone	IRC	2,729,036	2,729,036	8/1/2015	12/31/2015
OFDA	Train healthcare workers on IPC at 1100 PHUs in Sierra Leone	IRC	5,374,738	5,374,738	7/1/2015	12/31/2015
OFDA	Train healthcare workers on IPC at 1100 PHUs in Sierra Leone	IRC	4,400,000	4,400,000	11/15/2014	10/31/2015
OFDA	Train staff on IPC at 18 government hospitals in Sierra Leone	IRC	5,288,573	5,288,573	2/16/2015	1/16/2016

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USAID Bureau/ Office	Program Description†	Implementing Partner	Committed (\$) [‡]	Obligated (\$) [‡]	Period of Performance [§]	
					Start Date	End Date
OFDA	Manage ETU and support for community outreach, psychosocial support, and active case-finding in Kontorlah, Sierra Leone	MEDIAIR,SWI	2,858,272	2,858,272	12/1/2014	12/31/2015
OFDA	Improve access to enhanced isolation and medical care for communities affected by the Ebola outbreak	MEDIAIR,SWI	2,490,944	2,490,944	12/1/2014	12/31/2015
OFDA	Support social mobilization activities and EVD case-finding in all chiefdoms of Koinadugu district, Sierra Leone	OXFAM-GB	690,646	690,646	1/1/2015	12/31/2015
OFDA	Manage five CCCs, and support for rapid response teams to respond to Ebola events in remote communities and social mobilization targeting Ebola-affected communities in Kono and Kambia districts	Partners in Health	7,881,461	7,881,461	1/1/2015	12/31/2015
OFDA	Comprehensive standardized survivor support program providing non-food item (NFI) kits to Ebola survivors and establishing an NGO network to provide protection support to Ebola affected-children in all networks	UNICEF	2,500,000	2,500,000	10/1/2014	10/31/2015
OFDA	Provide NFI kits for Ebola survivors and provision of PPE for PHUs in Sierra Leone	UNICEF	1,996,000	1,996,000	10/1/2014	10/31/2015
OFDA	Provide PPE and EVD response supplies for Ebola care facilities and PHUs, and support for school reopening, polio and measles immunization campaign, and social mobilization in Sierra Leone	UNICEF	10,000,000	10,000,000	1/22/2015	12/31/2015
OFDA	Support UNHAS, transport and mobile warehousing units for EVD response supplies, and specimen transport	UNWFP	10,000,000	10,000,000	1/29/2015	12/31/2015
OFDA	Support UNHAS, transport and mobile warehousing units for EVD response supplies, and specimen transport	UNWFP	10,000,000	10,000,000	1/29/2015	12/31/2015

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USAID Bureau/Office	Program Description†	Implementing Partner	Committed (\$)*	Obligated (\$)*	Period of Performance§	
					Start Date	End Date
OFDA	Support IPC supervision at non-Ebola healthcare facilities and maintain Ebola surveillance activities in all districts of Sierra Leone	UNWHO	8,000,000	8,000,000	6/1/2015	1/31/2016
OFDA	Support IPC monitoring and improve quality of care in all facilities providing care for Ebola patients in Sierra Leone	UNWHO	4,000,000	4,000,000	12/19/2014	12/31/2015
OFDA	Ambulance disinfection and fleet management	World Vision - USA	2,472,525	2,472,525	12/15/2014	12/31/2015
Pillar 2: Mitigate Second Order Impacts of the Crisis						
Regional						
Global Health	Develop repurposed shipping containers as scalable, rapidly deployable and potentially semi-permanent ETUs that include training and process pathways, as well as patient and supply tracking systems	Baylor College of Medicine	613,927	613,927	5/29/2015	5/28/2016
Global Health	Develop colored bleach mist formula to visualize sprayed surfaces and ensure proper coverage and decontamination	Columbia University	649,342	649,342	7/8/2015	12/30/2017
Global Health	Develop open source mobile platform that supports health data collection, decision support, client tracking, SMS communication, and map-based visuals to alleviate current communication burden and disconnect	DIMAGI, INC.	298,996	298,996	5/22/2015	5/21/2016
Global Health	Develop a new clothing system for improved heat stress relief, full body liquid integrity, and ease of doffing	International Personnel Protection	243,205	243,205	5/22/2015	4/21/2016
Global Health	Leverage health information system and mobile phones to support frontline health workers	IntraHealth International	700,000	700,000	6/9/2015	6/8/2016
Global Health	Develop safer and faster doffing PPE for frontline health workers and design new PPE for community and family care	Johns Hopkins University	793,635	793,635	9/26/2012	9/25/2017

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USAID Bureau/Office	Program Description†	Implementing Partner	Committed (\$)*	Obligated (\$)*	Period of Performance§	
					Start Date	End Date
Global Health	Develop modular and rapidly deployable treatment units that use technology to moderate unit temperature and simplify decontamination efforts for safer, more comfortable conditions	Modula S Inc.	500,000	500,000	5/1/2015	4/30/2019
Global Health	Develop wearable technologies, including a disposable, Bluetooth-enabled sensor that attaches like a band-aid and allows for remote monitoring of Ebola patients' critical vital signs	Scripps Health	632,058	632,058	6/9/2015	6/8/2016
Global Health	Develop low-cost, battery-powered infusion monitor that delivers fluids with precision to patients, thereby eliminating the risk of fluid overload and enhancing survival	Shift Labs, Inc.	318,682	318,682	12/22/2014	12/21/2019
Global Health	Develop long-lasting, spray-on barrier to be used as a key component in the design of effective medical PPE materials that are breathable, require fewer removals, are reusable, and generate less infectious waste	SPR Advanced Technologies, Inc.	655,788	655,788	5/22/2015	11/18/2015
Global Health	Develop state-of-the-art, easy-to-assemble chambers that decontaminate health care workers and equipment in less than three minutes without hazardous chemicals	TOMI Environmental Solutions, Inc.	559,003	559,003	11/18/2014	11/17/2017
Global Health	Develop a redesigned ETU, which includes ergonomic features that will allow for more effective heat and air exchange to provide a cooler environment for health care workers and patients	Makerere University (MAK)	482,231	482,231	6/10/2015	2/10/2016
Global Development Lab	Accra Data Harmonization Summit held in May 2015 in Ghana that focused on health information sharing policies, tools, and standards to improve the region's ability to respond to current and future outbreaks	MEASURE Evaluation	142,381	142,381	7/1/2015	6/28/2019

APPENDIX D: USAID PROGRAMS

USAID Bureau/ Office	Program Description†	Implementing Partner	Committed (\$)‡	Obligated (\$)‡	Period of Performance§	
					Start Date	End Date
Global Development Lab	Sponsorship for the Wilton Park Working Group on Interoperability Standards conference, with a focus on refining technology-enabled data systems to support facility- and district-level health workers for improved disease outbreak surveillance and improved delivery of routine health care services	mPowering Frontline Health Workers	36,000	36,000	3/17/2014	3/16/2019
Global Development Lab	Support learning agenda that focused on the use of data and digital technologies in the crisis response, and to identify actionable recommendations on the use of data and digital systems in future response efforts	mSTAR	100,000	100,000	9/30/2012	9/29/2017
Global Development Lab	Embed health advisor in the region to analyze the existing eHealth environment, provide recommendations and consultations on solutions, and support implementation of health information systems standards in the three Ebola-affected countries for one year	WHO	399,986	399,986	9/11/2009	9/29/2020
Global Development Lab	Communications campaign to engage private software developers, mobile platform developers, technical organizations working in health information systems strengthening, and implementing partners engaged in the Ebola-affected communities to submit expressions of interest on specific innovative solutions that community members believe could strengthen interoperability of health information systems in the West Africa region in the wake of the Ebola outbreak	DAI	12,395	12,395	9/24/2014	9/26/2018
FFP	Nutritional support for acutely malnourished children	UNICEF	3,935,510	3,935,510	6/22/2015	6/21/2016

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USAID Bureau/ Office	Program Description†	Implementing Partner	Committed (\$)‡	Obligated (\$)‡	Period of Performance§	
					Start Date	End Date
FFP	Early warning, analysis, and reporting on acute food insecurity	Chemonics/ FEWSNet	2,865,965	2,865,965	9/15/2015	3/3/2017
FFP	Purchase agreement for in-kind ready-to-use supplementary and therapeutic foods to UNICEF for children under five years old with severe acute malnutrition and Ebola patients and survivors in need of nutritional support	Edesia, Inc.	2,836,944	2,836,944	4/17/2015	10/14/2015
FFP	Support food assistance to EVD-affected Ivorian refugees and host communities	U.N. World Food Program	3,000,000	3,000,000	4/1/2015	4/30/2016
Guinea						
Guinea	Strengthen civil society to promote public dialogue regarding electoral processes	Consortium for Elections and Political Process Strengthening	1,500,000	1,500,000	8/26/2015	8/31/2016
Guinea	To support credible, participatory, transparent, peaceful, and fair elections	Search for Common Ground	500,000	500,000	9/27/2012	8/31/2016
Global Health	Restore basic health services	JHPIEGO Corporation	6,000,000	6,000,000	3/1/2014	3/1/2019
Global Health	Support for social mobilization and behavior change communications	Johns Hopkins University	5,500,000	5,500,000	9/26/2012	9/25/2017
Global Health	Increase the availability and quality of health service delivery data, and institutionalize data-driven decision-making	Carolina Institute for Developmental Disabilities	2,000,000	2,000,000	7/1/2014	6/30/2019
Global Development Lab	Embed two expert advisors in the Guinea Ministry of Health to provide dedicated technical and organizational support and training, and accelerate the development and integration of interoperable and sustainable digital platforms of country-led health information systems	MEASURE Evaluation	500,000	500,000	7/1/2014	6/28/2019
FFP	Provide food vouchers for emergency food assistance and market support	Catholic Relief Services	1,325,443	1,325,443	2/24/2015	12/31/2015

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USAID Bureau/ Office	Program Description†	Implementing Partner	Committed (\$)‡	Obligated (\$)‡	Period of Performance§	
					Start Date	End Date
FFP	Support emergency school feeding	U.N. World Food Program	7,182,907	7,182,907	3/25/2015	12/31/2016
Liberia						
Global Health	Restore routine health service delivery and strengthen IPC practices at up to 61 health facilities	JHPIEGO Corporation	10,500,000	10,500,000	3/1/2014	3/1/2019
Global Health	Support social mobilization and behavior change communication at the national and sub-national levels	Johns Hopkins University	2,600,000	2,600,000	9/26/2012	9/25/2017
Global Health	Strengthen routine immunization services and capacity	UN Children's Fund	2,000,000	2,000,000	9/1/2007	9/1/2020
Global Health	Restore routine health services, increase utilization of health services, and expand health worker capacity and capability	IRC and Partners	7,000,000	7,000,000	2/23/2015	2/22/2020
Global Development Lab	Innovation and Communication Technology Policy Roundtable in Liberia to address policy and market challenges which have impeded build out of communications infrastructure, and to start the process of developing a new communications infrastructure that will strengthen overall health systems and enable more timely information and response to future outbreaks	Alliance for Affordable Internet	20,000	20,000	8/5/2013	8/4/2016
Global Development Lab	Embed two expert advisors in the Liberia Ministry of Health, Health Monitoring and Evaluation Research unit, to provide dedicated technical and organizational support and training, and assist in accelerating the development and integration of interoperable and sustainable digital platforms of country-led health information systems	MEASURE Evaluation	500,000	500,000	7/1/2014	6/28/2019

APPENDIX D: USAID PROGRAMS

USAID Bureau/ Office	Program Description†	Implementing Partner	Committed (\$)‡	Obligated (\$)‡	Period of Performance§	
					Start Date	End Date
Global Development Lab	Develop the Government of Liberia's capacity to better respond to future disease outbreaks by strengthening e-government systems, capabilities, and policies across multiple Ministries	NetHope	80,377		9/30/2015	9/29/2020
FFP	Support targeted cash transfers, cash-for-work, and agricultural input vouchers for emergency food assistance and market recovery	ACDI/VOCA	8,999,973	8,999,973	3/17/2015	6/9/2016
FFP	Support targeted cash transfers and agricultural input vouchers for emergency food assistance and market recovery	Mercy Corps	8,970,000	8,970,000	1/7/2015	12/31/2015
FFP	Support targeted cash transfers, cash-for-work, and agricultural input vouchers for emergency food assistance and market recovery	Project Concern International	8,030,564	8,030,564	2/12/2015	9/11/2016
FFP	Support targeted cash transfers and agricultural input vouchers for emergency food assistance and market recovery	Save the Children	4,574,526	4,574,526	8/31/2015	11/30/2016
FFP	Support emergency school feeding	U.N. World Food Program	7,370,323	7,370,323	4/22/2015	10/31/2016
FFP	Support relief and recovery operation for EVD-affected Ivorian refugees	U.N. World Food Program	8,921,600	8,921,600	3/7/2014	12/30/2015
Africa Bureau	Empower civil society and media to hold government and other stakeholders accountable during the Ebola and post-Ebola periods by focusing on accountability, media monitoring, and technical support for community radio stations; reduce stigma of Ebola survivors	IREX	1,250,000	1,250,000	2/26/2010	11/30/2015
Sierra Leone						
Global Health	Support for citizen engagement platform to develop effective behavior change policies	IBM Research	526,355	526,355	7/16/2015	6/8/2016

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USAID Bureau/ Office	Program Description†	Implementing Partner	Committed (\$) [‡]	Obligated (\$) [‡]	Period of Performance [§]	
					Start Date	End Date
Global Health	Support social mobilization and behavior change communication at the national and sub-national levels	Johns Hopkins University	5,000,000	5,000,000	9/26/2012	9/25/2017
Global Health	Restore basic health services	JSI Research and Training Institute	15,000,000	15,000,000	10/1/2012	9/30/2017
Global Health	Procure essential medications and commodities for the Government of Sierra Leone	UNICEF	4,500,000	4,500,000	9/1/2007	9/1/2020
Global Health	Restore and expand public health supply chain capability	Management Sciences for Health	3,000,000	3,000,000	9/1/2011	9/1/2016
Global Development Lab	Embed two expert advisors in the Sierra Leone Ministry of Health to provide dedicated technical and organizational support and training, and assist in accelerating the development and integration of interoperable and sustainable digital platforms of country-led health information systems	MEASURE Evaluation	500,000	500,000	7/1/2014	6/28/2019
FFP	Distribute Title II and locally procured corn soy blend to children at risk of moderate acute malnutrition, support for agricultural input vouchers, seed loans to agricultural business centers, and targeted cash transfers	ACDI/VOCA	9,000,000	9,000,000	4/14/2015	4/13/2016
FFP	Support targeted cash transfers for emergency food assistance and market recovery	CARE	2,769,546	2,769,546	8/15/2015	11/15/2016
FFP	Support targeted cash transfers for emergency food assistance and market recovery	Catholic Relief Services	2,462,296	2,462,296	8/26/2015	1/31/2017
FFP	Support targeted cash transfers and cash grants to traders for emergency food assistance and market recovery	Save the Children	4,384,010	4,384,010	3/1/2015	1/31/2016
FFP	Support targeted cash transfers and agricultural input vouchers for emergency food assistance and market recovery	World Vision	3,585,767	3,585,767	7/28/2015	1/27/2017

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USAID Bureau/ Office	Program Description†	Implementing Partner	Committed (\$) [‡]	Obligated (\$) [‡]	Period of Performance [§]	
					Start Date	End Date
Pillar 4: Global Health Security						
Regional						
Senegal	Support behavior change communication for pandemic preparedness	ADEMAs	250,000	250,000	3/1/2012	9/30/2016
Senegal	Support for Ebola preparedness activities including organization of health centers and community sites and implementation of community outreach interventions	ChildFund	420,000	420,000	10/1/2011	9/30/2016
Senegal	Support Ebola pandemic preparedness activities including building capacity of health workers and health facilities in IPC, monitoring capacities, and the establishment of an alert platform.	IntraHealth International	330,000	330,000	10/1/2011	9/30/2016
Global Health	Build capacity of the Government of Cote d'Ivoire to prepare and respond to infectious diseases outbreaks	ABT Associates, Inc.	550,000	550,000	9/1/2012	9/1/2017
Global Health	Strengthen surveillance systems to detect and monitor highly infectious diseases, particularly epidemic-prone diseases like Ebola	Carolina Institute for Developmental Disabilities	1,400,000	1,400,000	7/1/2014	6/30/2019
Global Health	Support for West African Regional and in-country Ebola preparedness workshops	DAI	2,002,000	2,002,000	10/1/2014	9/30/2019
Global Health	Develop and maintain the capacity and skills to prevent, detect, and respond to pandemic threats at the regional, national, and subnational levels in West Africa	DAI	21,000,000	21,000,000	10/14/2014	9/19/2019
Global Health	Support for surveillance, capacity strengthening, and risk modeling to identify if livestock are associated with evolution, spillover, amplification, or spread of Ebola in West Africa	Food and Agriculture Organization (FAO)	49,950,000	49,950,000	9/1/2006	4/30/2019
Global Health	Build the capacity of community health workers to deliver services observing updated IPC guidelines	JHPIEGO Corporation	1,500,000	1,500,000	3/1/2014	3/1/2019

APPENDIX D: USAID PROGRAMS

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USAID Bureau/ Office	Program Description†	Implementing Partner	Committed (\$) [‡]	Obligated (\$) [‡]	Period of Performance [§]	
					Start Date	End Date
Global Health	Strengthen the capacity of country health communication programs to detect and respond to epidemic-prone diseases such as Ebola	John Hopkins University	1,100,000	1,100,000	9/1/2012	9/1/2017
Global Health	Develop Ebola communication materials, including community care campaigns	John Hopkins Center for Communication Programs	4,888,500	4,888,500	9/26/2012	9/25/2017
Global Health	Strengthen community-based surveillance systems to detect and monitor Ebola and other epidemic-prone diseases, and provide immediate reporting structures	Management Sciences for Health	4,615,000	4,615,000	9/1/2011	9/1/2016
Global Health	Contribute to the implementation of the Senegal National Response Plan for the prevention of Ebola outbreaks	Pathfinder	536,306	536,306	9/30/2011	9/29/2016
Global Health	Support the detection and control of infectious diseases	Population Science International	1,150,000	1,150,000	4/1/2014	4/1/2019
Global Health	Strengthen epidemic control capacity by training facility- and community-based health workers to detect and report suspect cases of Ebola and other highly infectious diseases	UNICEF	2,800,000	2,800,000	9/1/2007	9/1/2020
Global Health	Provide longitudinal surveillance and support laboratory capacity building in West Africa	University of California, Davis	49,200,000	49,200,000	10/1/2014	9/30/2019
Global Health	Support university networks to assist government ministries to train the future health workforce, with particular attention to addressing the threat posed by Ebola and other zoonotic diseases	Office Sponsored Projects	24,400,000	24,400,000	11/1/2014	11/1/2019
Global Health	Deploy technical experts to Guinea, Liberia, and Sierra Leone, provide operational and personnel support, and provide 105,000 sets of PPE for health staff and outbreak investigators	WHO,WHO/AFRO	12,787,500	12,787,500	9/1/2009	9/1/2016

TABLE NOTES:

† Program descriptions may refer to multiple awards, and activities under the same award may be reflected under different pillars in the table.

‡ Figures for commitments and obligations may include funding associated with multiple awards.

§ Information from USAID on periods of performance corresponds with dates stipulated in award documents. Ebola-related program activities may have been performed at a later date than the indicated start date for a program. In some cases start dates predate the Ebola outbreak.

APPENDIX E: ACRONYMS

ACRONYMS

ACDI/VOCA	Agricultural Cooperative Development International and Volunteers in Overseas Cooperative Assistance
ARC	American Refugee Committee
AEU	Africa Ebola Unit, U.S. Agency for International Development
AFHSC	Armed Forces Health Surveillance Center
ASPR	Office for the Assistant Secretary for Preparedness and Response, U.S. Department of Health and Human Services
BARDA	Biomedical Advanced Research and Development Authority, U.S. Department of Health and Human Services
CARE	Cooperative for Assistance and Relief Everywhere
CBEP	Cooperative Biological Engagement Program
CDC	Centers for Disease Control and Prevention, U.S. Department of Health and Human Services
CRS	Catholic Relief Services
CIGIE	Council of the Inspectors General on Integrity and Efficiency
CORs	Contracting Officers Representatives
DAI	Development Alternatives Incorporated
DARPA	Defense Advanced Research Projects Agency, U.S. Department of Defense
DART	Disaster Assistance Response Team, U.S. Agency for International Development
DCHA	Bureau of Democracy, Conflict, and Humanitarian Assistance, U.S. Agency for International Development
DHS	U.S. Department of Homeland Security
DoD	U.S. Department of Defense
DOS	U.S. Department of State

APPENDIX E: ACRONYMS

DTRA	Defense Threat Reduction Agency, U.S. Department of Defense
EOC	Emergency Operations Center
EPT 2	Emerging Pandemic Threats Program, Phase 2
ESF	Economic Support Fund
ETU	Ebola Treatment Unit
EVD	Ebola Virus Disease
FDA	Food and Drug Administration, U.S. Department of Health and Human Services
FEWS Net	Famine Early Warning System Network
FFP	Office of Food for Peace, U.S. Agency for International Development
FY	Fiscal Year
G-7	Group of 7
GAO	Government Accountability Office
GDP	Gross Domestic Product
GHSA	Global Health Security Agenda
HHS	U.S. Department of Health and Human Services
HC3	Health Communication Capacity Collaborative
HKI	Hellen Keller International
IDA	International Disaster Assistance
IFRC	International Federation of Red Cross and Red Crescent Societies
IHR	International Health Regulations
IMC	International Medical Corps
IOM	International Organization for Migration
IPC	Infection prevention and control
MMU	Monrovia Medical Unit

APPENDIX E: ACRONYMS

MOH	Ministry of Health
MSF	Médecins Sans Frontières (Doctors Without Borders)
NGO	Nongovernmental organization
NIAID	National Institute of Allergy and Infectious Disease, National Institutes of Health, U.S. Department of Health and Human Services
NIH	National Institutes of Health, U.S. Department of Health and Human Services
OCO	Overseas Contingency Operation
OFDA	Office of Foreign Disaster Assistance, U.S. Agency for International Development
OIG	Office of Inspector General
OUA	Operation United Assistance
OXFAM-GB	Oxford Committee for Famine Relief – Great Britain
PPE	Personal Protective Equipment
RMT	Response Management Team
SCF/US	Save the Children Fund United States
UN	United Nations
UNICEF	United Nations Children’s Fund
UNMEER	United Nations Mission for Ebola Emergency Response
USAID	U.S. Agency for International Development
USPHS	U.S. Public Health Service, U.S. Department of Health and Human Services
VSV	Vesicular stomatitis virus
VSV-EBOV	Vesicular stomatitis virus – Ebola Virus
WFP	World Food Programme
WHO	World Health Organization

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Department of Defense Hotline
dodig.mil/hotline
1-800-424-9098

Department of State Hotline
oighotline@state.gov
1-800-409-9926 or 202-647-3320

Department of Health and Human Services
oig.hhs.gov/report-fraud
1-800-HHS-TIPS (1-800-447-8477)

