USAID Office of Inspector General

HHS Office of Inspector General

Quarterly Progress Report on

U.S. Government International Ebola Response and Preparedness Activities

Fiscal Year 2016, First Quarter | December 31, 2015

An Ebola response team from the Bong County Ebola treatment unit educates a town in Bong Mines, Liberia about Ebola. (Morgana Wingard for USAID, October 9, 2015)

Quarterly Progress Report

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U.S. Government

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Preparedness

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Children and families waiting to be screened at the Ola Children's Hospital in Freetown, Sierra Leone. (Photo by Jesse Wilson, October 9, 2015)

Executive Summary

Widespread transmission of the Ebola virus disease (EVD) had ended in all of the three countries—Guinea, Liberia, and Sierra Leone—most affected by the outbreak by the end of 2015. The U.S. Government, nevertheless, continued supporting Ebola response and preparedness efforts in all three nations, as well as working with national authorities and development partners to transition response activities to recovery efforts.

The United States remained the largest international financial contributor to response efforts. U.S. Government agencies reported $76.9 million in new obligations and $183.4 million in new disbursements toward international Ebola response, recovery and preparedness efforts during the quarter.

Major response activities supported by the U.S. Agency for International Development (USAID), such as the operation of EVD community care centers, management of Ebola treatment units, and implementation of other measures to promote the rapid isolation and treatment of EVD cases, concluded during this reporting period. However, the Centers for Disease Control and Prevention (CDC) continued to provide training and technical assistance to maintain surveillance of EVD and other diseases of public health importance and strengthen local response capacity in the event of future outbreaks. USAID provided support to ongoing efforts to mitigate the second-order effects of the outbreak by working to address acute food insecurity, support the restoration of basic health services, improve local governance and economies, and strengthen health information and communication systems, but did not initiate new Ebola-related programs in these areas. To promote global health security, the U.S. Government committed to assist 13 more countries in achieving related objectives. In addition, CDC established new epidemiological programs in 16 countries.

During the quarter, the Inspector General community continued to execute a significant body of work to promote accountability of U.S. Government activities in these areas. In association with these efforts, the USAID Office of Inspector General (OIG) issued one new audit related to Office of U.S. Foreign Disaster Assistance activities in Liberia. USAID OIG found that social mobilization and case management activities were contributing to the success of Liberia's overall Ebola response, but noted problems with performance measures, controls over cash payments, and transition plans. Meanwhile, the Department of Defense (DoD) OIG issued an audit on U.S. Army contract oversight in support of Operation United Assistance, the DoD mission to help combat EVD in West Africa. DoD OIG found that although the Army had an adequate number of contract officer's representatives, the Army did not provide sufficient contract oversight.

NUMBERS AT A GLANCE

$2.55 billion

Cumulative U.S. Government obligations

$1.24 billion

Cumulative U.S. Government disbursements

10

Number of new confirmed Ebola cases reported to the World Health Organization during the quarter

17,000

Estimated number of Ebola survivors living in Guinea, Liberia, and Sierra Leone

10

Number of ongoing Ebola-related audits and reviews by the OIGs for DoD, DHS, DOS, GAO, HHS, and USAID at the end of the reporting period

Ebola Outbreak in West Africa

The West Africa EVD epidemic emerged in Guinea in December 2013 and subsequently spread to neighboring Liberia and Sierra Leone as well as to seven other countries.[1] The World Health Organization (WHO) declared the EVD outbreak a "public health emergency of international concern" on August 8, 2014, and the United Nations (UN) Security Council declared the outbreak a "threat to international security and peace" on September 18, 2014.[2]

Figure 1. Cumulative EVD Case Counts by Country, as of January 3, 2016. (Source: WHO, January 3, 2016)

Guinea, Liberia, and Sierra Leone have been the most affected countries, with a cumulative total of 28,601 confirmed, probable, and suspected EVD cases and 11,300 deaths as of January 3, 2016.[3] WHO has estimated that there are approximately 17,000 EVD survivors living in West Africa.[4] According to the UN Children's Fund (UNICEF), this group includes 1,260 child survivors, and nearly 23,000 children have lost one or both parents to the disease.[5]

For the first time since the epidemic started 2 years ago, widespread transmission of EVD ceased. At the end of the quarter, there were no confirmed EVD cases in the three most-affected countries–Guinea, Liberia, and Sierra Leone.[6] WHO declared the end of EVD transmission in Sierra Leone on November 7, 2015, and Guinea was declared free of Ebola transmission on December 29, 2015.[7] If no new confirmed EVD cases emerged in Liberia, WHO planned to declare the end of EVD transmission in that country for the third time on January 14, 2016.[8] To be declared Ebola virus-free by WHO, a country needs to achieve a 42-day period with no new cases of the disease.[9]

During the quarter, Guinea reported seven new confirmed cases and Liberia reported three.[10] The last confirmed EVD case in Guinea, reported on October 29, 2015, was a child born in an Ebola treatment center in Conakry.[11] Liberia's recovery efforts received a setback when a 10-year-old child was confirmed to be infected with EVD on November 19, 2015, and two family members subsequently tested positive.[12] The last two Liberian EVD survivors tested negative for the disease on December 3, 2015, and individuals linked to these EVD cases completed their monitoring period on December 10, 2015.[13]

Notwithstanding the progress made in controlling the EVD outbreak in 2015, the WHO Director-General declared that the West Africa Ebola outbreak still remained a "public health emergency of international concern" in December 2015.[14] Response actors remained vigilant for cases of the disease in all three countries as the potential for renewed transmission from EVD survivors or animal hosts of the virus was possible.[15] Between March and November 2015, WHO reported 10 small EVD outbreaks due to the re-emergence of a persistent virus from the survivor population and WHO warned that new EVD cases may emerge.[16] All three countries have surveillance systems to enable health workers and the public to report suspected EVD cases to the relevant authorities.[17]

U. S. Government Response to the Ebola Outbreak

The U.S. Government has been engaged in international Ebola response efforts since the outbreak was first identified in March 2014.[18] At the time, CDC deployed personnel and USAID provided funds to support response efforts.[19] USAID later deployed a Disaster Assistance Response Team (DART) to the region to coordinate U.S. Government efforts to contain the EVD outbreak.[20]

The U.S. Government's strategy for EVD outbreak response and preparedness is organized around four pillars of activity: (1) controlling the outbreak, (2) mitigating second-order impacts of the crisis, (3) building coherent leadership and operations, and (4) strengthening global health security.[21] 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 overseas while CDC led the medical and public health components of the response.[22] Other federal agencies, such as DoD, the Department of State (DOS), the Food and Drug Administration (FDA), the Department of Health and Human Services (HHS) Office of the Assistant Secretary for Preparedness and Response (ASPR) and Biomedical Advanced Research and Development Authority (BARDA), National Institutes of Health (NIH), and the U.S. Public Health Service, also made significant

contributions to the overall U.S. response.

During the quarter, U.S. Government Ebola response and preparedness efforts reflected the continuation of a number of activities under existing programs as many other response activities, particularly EVD control efforts, concluded. Despite plans to gear up recovery efforts, few new programs and activities were undertaken. While 82 USAID awards concluded during the quarter, for example, no new Ebola-related awards were initiated.[23] Additionally, USAID reported approximately $2.2 million in new obligations for activities to mitigate second-order impacts during the quarter, compared to $55.5 million in new obligations for similar activities during the previous quarter.[24]

Funding Response, Preparedness, and Recovery Efforts

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.[25] U.S. Government commitments to these efforts were greater than the amounts provided by the next nine leading donors combined.[26]

Congress provided more than $5.370 billion in emergency funds for Ebola prevention and response to several federal agencies as part of the Fiscal Year (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.[27] While appropriations to USAID and DOS have a clear tie to international activities, funds appropriated to HHS and DoD were made available for either domestic or international work.[28] Funding that supports vaccine and therapeutic drug development, for example, may be used in the United States or abroad. As shown in Table 1, Congress made funds that it provided for Ebola preparedness and response available over different periods.[29]

While 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.[30]

Table 1: Availability of Ebola-related funding for U.S. agencies:

DoD	Procurement	FY 2017
	Research, Development, Test and Evaluation	FY 2016
DOS	Diplomatic and Consular Programs	FY 2016
	Nonproliferation, Anti-Terrorism, Demining and Related Programs	FY 2016
HHS	CDC	FY 2019
	FDA	Available until expended
	NIH	FY 2016
	Public Health and Social Services Emergency Fund	FY 2019
USAID	Economic Support Funds	FY 2016
	Global Health	Available until expended
	International Disaster Assistance	Available until expended
	Operating Expenses	FY 2016

Overall, as shown in Table 2, U.S. Government agencies had obligated about $2.55 billion towards these efforts as of December 31, 2015. Available information on U.S. Government Ebola-related spending indicates that approximately $1.238 billion had been disbursed by this date. As a share of total obligations, these disbursements accounted for approximately 49 percent. U.S. Government agencies reported $87.5 million in new obligations and $76.9 million in new disbursements toward international Ebola response, recovery and preparedness efforts during the quarter.

In reviewing the following table, note that USAID had been unable to provide updated obligation and disbursement information through the end of the reporting period. Rather, USAID figures reflect conditions as of December 1, 2015. According to USAID, financial information for the month of December 2015 was still being finalized at the time of this report's publication.

Table 2. Ebola-related International Appropriations, Obligations, and Disbursements as of December 31, 2015 (unaudited, in millions of dollars)

Department / Agency Account	Appropriated†				Obligated	Disbursed
	FY 2013	FY 2014	FY 2015	Total	FY 2014-16	FY 2014-16
DoD‡	**18.9**	**611.8**	**139.8**	**770.6**	**665.7**	**438.9**
Overseas, Humanitarian, Disaster Assistance, & Civic Aid	-	485.0	-	485.0	431.7	310.8
Cooperative Threat Reduction	15.5	69.6	-	85.1	49.6	42.2
Research & Development, Test & Evaluation	3.4	57.1	122.8	183.4	167.4	80.1
Procurement	-	-	17.0	17.0	16.9	5.8
Operations & Maintenance	-	<0.1	-	<0.1	<0.1	<0.1
DOS	**-**	**-**	**46.7**	**46.7**	**32.1**	**9.0**
Diplomatic & Consular Programs	-	-	36.4	36.4	22.1	9.0
Nonproliferation, Anti-Terrorism, Demining, and Related Programs	-	-	5.3	5.3	5.0	0
Economic Support Fund	-	-	5.0	5.0	5.0	-
HHS	**-**	**33.2**	**1,621.4**	**1,654.6**	**672.8**	**206.4**
CDC	-	-	1,200.0§		305.4	123.5
NIH	-	33.2††	238.0††	271.2††	202.8	53.4
Public Health & Social Services Emergency Fund	-	-	157.0††	157.0††	153.3	25.6
FDA	-	-	26.4††	26.4††	11.3	3.9
USAID‡‡	**-**	**-**	**2,479.7**	**2,479.7**	**1,179.8**	**583.9**
International Disaster Assistance	-	-	1,436.3§§	1,436.3	886.9	536.8
Economic Support Fund	-	-	706.7§§	706.7	125.7	31.9
Global Health Programs	-	-	312.0	312.0	161.6	13.6
Operating Expenses	-	-	19.0	19.0	3.7	<0.1
OIG	-	-	5.6	5.6	2.0	1.6
TOTAL	**18.9**	**645.0**	**4,287.6**	**4,951.6**	**2,550.3**	**1,238.2**

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

‡ DoD management asserted to DoD OIG that the DoD FY 2015, 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 OIG could not obtain sufficient appropriate evidence to provide a basis for an audit opinion. Accordingly, DoD OIG did not express an opinion on the DoD FY 2015, 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, Test & Evaluation include estimates for ongoing work.

Previously reported amounts appropriated under the Overseas, Humanitarian, Disaster Assistance, & Civic Aid account include $265 million that was realigned to support other humanitarian assistance, disaster relief efforts, and pandemic response initiatives during FY 2015.

DoD acknowledged that previous reporting overstated disbursement amounts, and the revised disbursement amounts were based on updated reporting.

Funds were de-obligated under Cooperative Threat Reduction and Research, Development, Test & Evaluation for projected requirements that did not materialize, and DoD reallocated previously appropriated funds accordingly.

§ 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 specifically designated for international use. In addition to the $305.4 million that CDC had obligated toward international Ebola response and preparedness activities as of December 31, 2015, CDC reported that it had obligated $439.7 million for activities inside the United States.

†† Includes funding for possible domestic or international use

‡‡ USAID figures reflect obligations and disbursements as of December 1, 2015. 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.

§§ 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 Funds to reimburse prior year accounts for pre-enactment obligations.

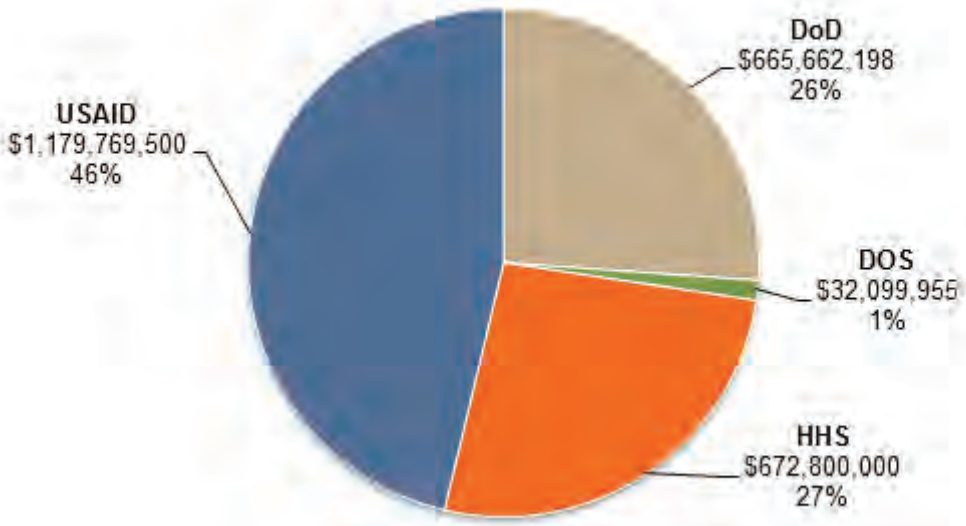


Figure 2. U.S. Government Obligations for International Ebola Efforts by U.S. Agency, as of December 1, 2015. (DoD OIG, DOS OIG, HHS OIG, USAID Office of Budget and Resource Management)

As Figure 2 illustrates, 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 46 percent, followed by HHS with 27 percent, DoD with 26 percent each, and DOS with 1 percent.

DoD reported the largest amount of new obligations, with $33.9 million, an increase of 5 percent over the previous quarter. HHS reported $27.3 million in new international obligations during the reporting period (an increase of 4 percent), with CDC accounting for the largest share of this total with $24.5 million. For its part, USAID reported $15.7 million in additional obligations as of December 1, 2015, while DOS reported no new obligations during the reporting period.

USAID tracks its project spending in line with the U.S. Government strategy for Ebola preparedness and response. As of December 31, 2015, USAID reported $1.180 billion in Ebola preparedness and response related obligations. Of this total, about $787 million or approximately 67 percent, was associated with activities to control the EVD outbreak and was the initial focus of USAID programming. Outbreak control activities also accounted for

the largest share of USAID disbursements, with 86 percent of USAID's Ebola-related disbursements through December 31, 2015.[31]

U.S. activities to mitigate second order impacts and strengthen global health security accounted for 16 percent each, respectively, of obligations, which remained the same over the past two quarters, as Figure 3 illustrates. Activities to build coherent leadership and operations were associated with 1 percent of total USAID obligations through the end of the reporting period, which is consistent with USAID plans on internal operating expenses.

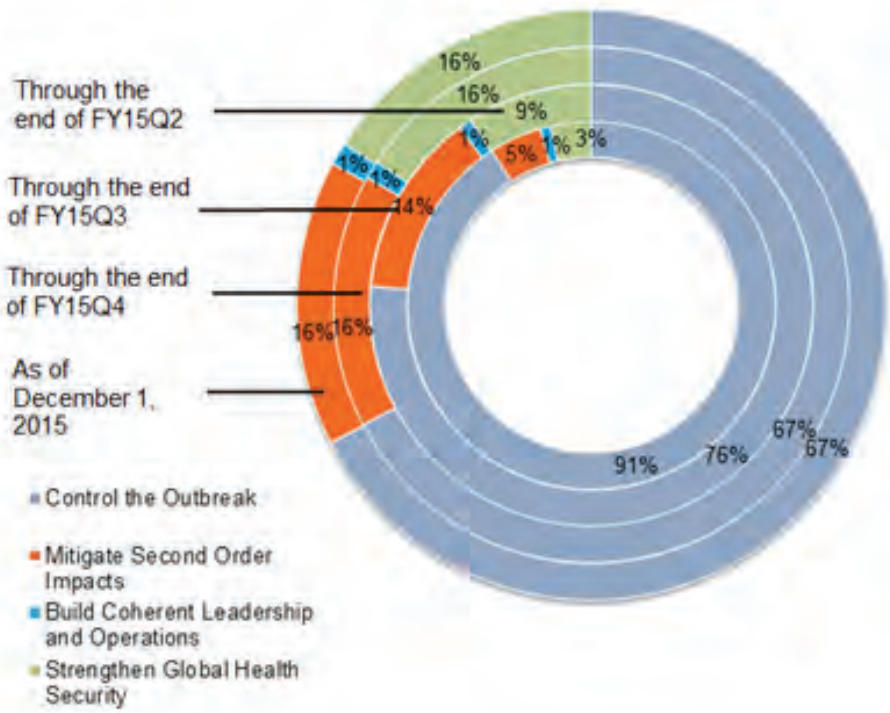


Figure 3. USAID Obligations by Strategy Pillar and Quarter, as of December 1, 2015. (USAID Office of Budget and Resource Management)

USAID also tracks its spending by geographical focus. During this quarter, USAID obligated an additional $5.9 million for activities in Guinea, Liberia, and Sierra Leone, representing an increase of less than 1 percent since last quarter.[32] As Figure 4 illustrates, the distribution of USAID obligations across the region and the three countries remained fairly steady over the past two quarters. Since the second quarter of FY2015, however, the balance of resources has shifted from Liberia-based activities to those with a regional focus.

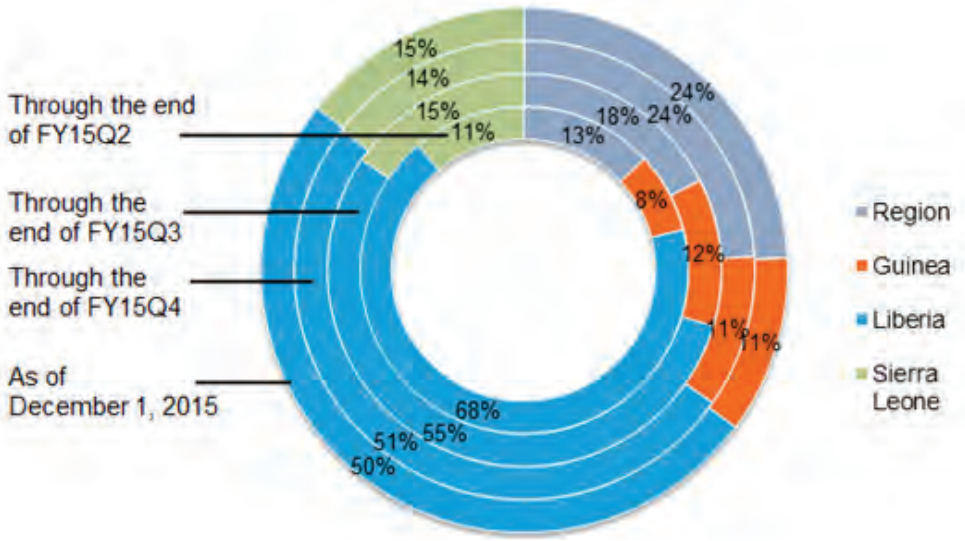


Figure 4. USAID Obligations by Geographical Focus and Quarter, as of December 1, 2015. (USAID Office of Budget and Resource Management)

U.S. Government Efforts to Control the Outbreak

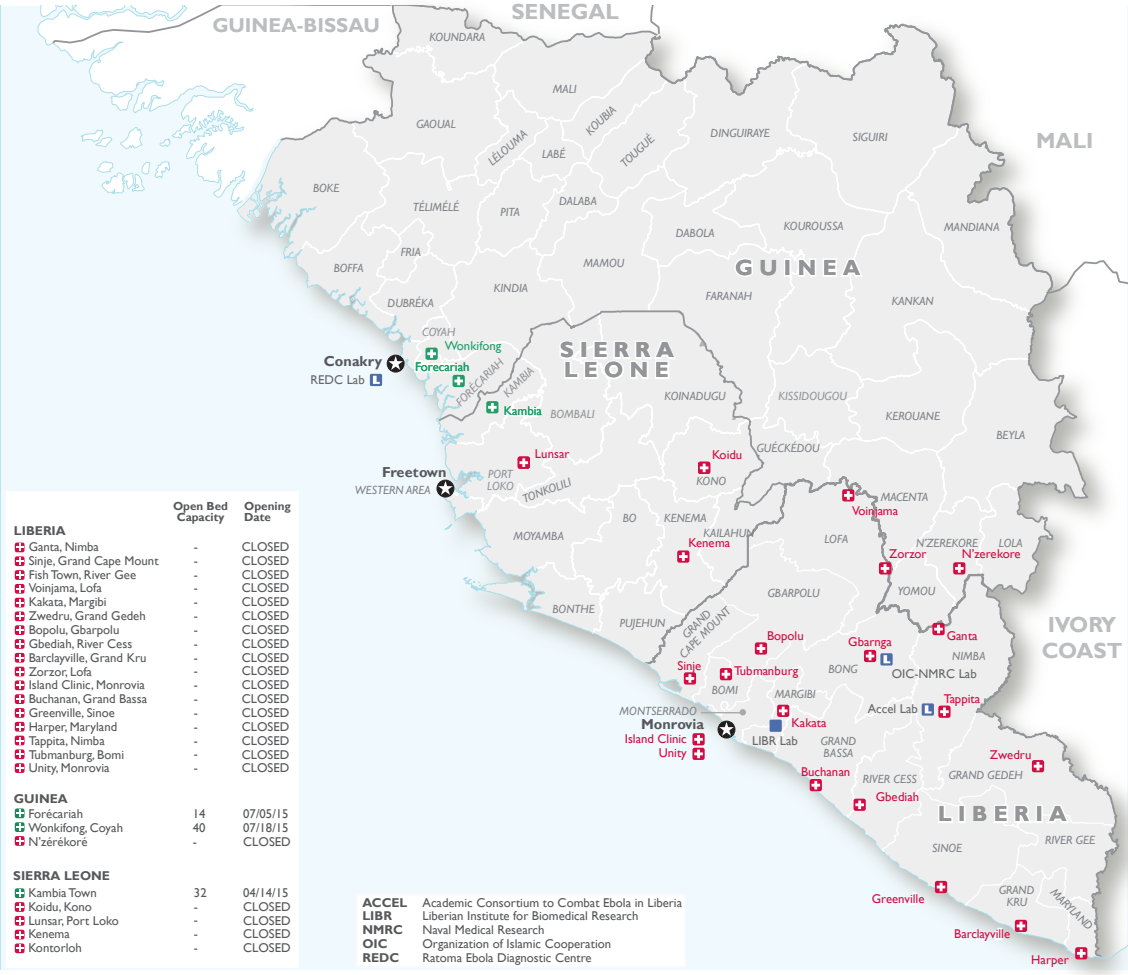
Enhanced EVD control measures supported by the U.S. Government such as contact tracing, surveillance, and safe burial teams, as well as behavior change, community outreach, and social mobilization efforts reportedly contributed to halting EVD transmission in West Africa.[33] The U.S. Government remained committed, according to the White House, to supporting Guinea, Liberia, and Sierra Leone with building and maintaining strong surveillance, laboratory, and rapid outbreak response systems for new EVD cases.[34]

CDC reported that key challenges to EVD control efforts during the quarter included maintaining critical healthcare gains made during the response, reinforcing practices to combat complacency, and poor communication connectivity.[35] In Guinea, USAID confronted and worked to resolve logistical challenges associated with the distribution of personal protective equipment to partners and other EVD response actors.[36]

The U.S. Government constructed Ebola Treatment Units (ETUs) during the outbreak response to provide safe and effective management of EVD cases by isolating and treating suspected, probable, and confirmed EVD patients. Two U.S.-supported ETUs remained operational in Guinea at the end of the quarter, and one U.S.-supported ETU in Sierra Leone remained open in December 2015.[37] All U.S.-supported ETUs in Liberia were closed at the end of October 2015.[38]

The U.S. Government also enhanced EVD surveillance by supporting

alternative EVD diagnostic tools and providing mobile laboratories to increase diagnostic capacity in the region. In Guinea, Liberia, and Sierra Leone, CDC supported Integrated Disease Surveillance and Response programs to promote surveillance and laboratory capacity for detecting EVD and other diseases of public health significance.[39] By the end of the quarter, the U.S. Government continued to provide support for one laboratory in Guinea and three laboratories in Liberia.[40]



	Open Bed Capacity	Opening Date
LIBERIA		
Ganta, Nimba	-	CLOSED
Sinje, Grand Cape Mount	-	CLOSED
Fish Town, River Gee	-	CLOSED
Voinjama, Lofa	-	CLOSED
Kakata, Margibi	-	CLOSED
Zwedru, Grand Gedeh	-	CLOSED
Bopolu, Gbarpolu	-	CLOSED
Gbediah, River Cess	-	CLOSED
Barclayville, Grand Kru	-	CLOSED
Zorzor, Lofa	-	CLOSED
Island Clinic, Monrovia	-	CLOSED
Buchanan, Grand Bassa	-	CLOSED
Greenville, Sinoe	-	CLOSED
Harper, Maryland	-	CLOSED
Tappita, Nimba	-	CLOSED
Tubmanburg, Bomi	-	CLOSED
Unity, Monrovia	-	CLOSED
GUINEA		
Forécariah	14	07/05/15
Wonkifong, Coyah	40	07/18/15
N'zérékoré	-	CLOSED
SIERRA LEONE		
Kambia Town	32	04/14/15
Koidu, Kono	-	CLOSED
Lunsar, Port Loko	-	CLOSED
Kenema	-	CLOSED
Kontorloh	-	CLOSED

Figure 5. Location of U.S. Government-supported ETUs and laboratories and laboratories in Guinea, Liberia, and Sierra Leone, as of January 1, 2016. (Source: USAID and WHO, 2016)

The U.S. Government-supported laboratory at the Liberia Institute of Biomedical Research reported a backlog of approximately 1,000 specimens in early October 2015.[41] According to USAID, the backlog was resolved the following month after DoD's Defense Threat Reduction Agency hired a laboratory coordinator and increased reagent supply.[42]

In Guinea, CDC supported the implementation of rapid diagnostic tests (RDTs) for EVD by providing the country with more than 10,000 RDTs, training partner organizations in their use, and operationalizing sentinel sites in Conakry and Forecariah.[43] By the end of the reporting period, more than 500 febrile patients had been tested using Ebola RDTs in Conakry, while more than 1,500 febrile patients and 300 corpses had been tested in Forecariah.[44] In Sierra Leone, CDC provided technical assistance to the Ministry of Health (MOH) to implement a rapid screening test pilot in three districts.[45]

Ebola laboratory in Monrovia, Liberia. (Morgana Wingard for USAID, September 26, 2014).

In Liberia, the government and response organizations transitioned from a focus on universal safe and dignified burials to expanded post-mortem oral swabbing with support from USAID partner Global Communities (GC).[46] With the shift in focus, GC started demobilizing burial teams in Liberia.[47] Sierra Leone also transitioned swabbing and burial procedures from safe and dignified burials as a core approach to expanded post-mortem oral swabbing after the country was declared free of EVD transmission.[48]

Guinea, Liberia, and Sierra Leone deployed rapid response teams (RRTs) to address new confirmed cases as part of their respective national response plans.[49] RRTs promoted Ebola prevention activities, encouraged individuals to report suspected Ebola cases, and sought to detect and respond to any new Ebola cases.[50]In Liberia, USAID partner Medical Teams International collaborated with county health teams to support RRTs.[51] When new EVD cases emerged during the quarter, CDC and USAID supported case investigation and contact tracing efforts, and CDC collaborated with NIH, WHO, and the Government of Liberia with the vaccination of approximately 170 primary and secondary contacts in Liberia. [52]

Porous borders between Guinea, Liberia, and Sierra Leone have contributed to the spread of the EVD outbreak in the past.[53] To reduce the future risk of cross-border transmission in Guinea, CDC trained approximately 70 officials at seaports in Nzerekore and Forecariah prefectures to detect signs and symptoms associated with Ebola, and continued to provide technical assistance in the exit screening process at Conakry International Airport.[54] Meanwhile, USAID partner International Organization for Migration (IOM) supported health checkpoints and surveillance for EVD detection at land borders and sea- and airports in the country.[55] With USAID funding, IOM aided Sierra Leone with EVD detection at land borders, seaports, and

airports, as well as EVD screening and infection prevention and control (IPC) training in government hospitals throughout the country.[56]

EVD Vaccines and Therapeutic Candidates

The U.S. Government supported clinical trials to evaluate the safety and efficacy of several EVD vaccine and therapeutic candidates in the United States and West Africa.[57] In collaboration with the Liberian government, the CDC- and NIH-supported Partnership for Research on Ebola Virus in Liberia (PREVAIL I) study enrolled 1,500 volunteers in Guinea, Liberia, and Sierra Leone to test the safety of and the immune system response to the National Institute of Allergy and Infectious Diseases (NIAID) / GlaxoSmithKline cAd3-EBOZ and NewLink Genetics/Merck rVSV-ZEBOV vaccine candidates.[58] When new EVD cases emerged in Liberia in November 2015, the FDA facilitated export of and access to the rVSV-ZEBOV vaccine to that country so the Government of Liberia and NIH could provide the vaccine to approximately 170 individuals.[59] In addition, the PREVAIL I study was amended to include a ring vaccination component.[60] In Sierra Leone, the CDC-sponsored Sierra Leone Trial to Introduce a Vaccine Against Ebola (STRIVE) clinical trial completed vaccination with more than 8,000 participants vaccinated.[61] Researchers planned to continue to follow-up with participants until June 2016 and outcomes of pregnancy until December 2016.[62]

The NIH-supported PREVAIL II study opened enrollment at sites in Guinea, Liberia, Sierra Leone, and the United States to assess the effectiveness of the optimized standard of care against optimized standard of care plus ZMapp, a therapeutic drug.[63] By January 4, 2016, NIH reported that 72 subjects had been enrolled in the trial.[64]

Meanwhile, FDA worked with product manufacturers, U.S. Government stakeholders, WHO, and foreign public health regulatory authorities to ensure the safety and efficacy of EVD countermeasures.[65] In November 2015, FDA hosted a workshop attended by representatives of affected West African countries to discuss the scientific, ethical, and practical issues related to clinical trial designs used to evaluate investigational products during a public health emergency.[66] FDA also provided advice to sponsors of Ebola medical countermeasures to clarify the regulatory pathways for approval of investigational vaccines, drugs, and diagnostics.[67]

Please refer to Appendix A for more information on U.S. Government support for EVD diagnostic tools and medical countermeasures.

Transition From Response to Recovery

The U.S. Government worked with national authorities and development partners to transition EVD emergency response activities to recovery efforts in Guinea, Liberia, and Sierra Leone.[68] This included supporting the construction of temporary isolation units at routine healthcare facilities to integrate EVD care into existing health infrastructure, building and strengthening rapid response capacity, and institutionalizing IPC protocols and EVD screening at government hospitals.[69] In Sierra Leone's Bombali district, for example, USAID supported partner GOAL with the construction of 90 semi-permanent isolation units to address cases of EVD emergence and to treat other communicable diseases.[70] USAID also led interagency transition planning in each country, reviewing each U.S. agency's response activities and clarifying how these activities will transition to other U.S. Government agencies, host governments, or development partners.[71]

Response activities and programs supported by USAID's Office of U.S. Foreign Disaster Assistance (OFDA) such as EVD community care centers, rapid isolation and treatment of EVD cases, and management of ETUs concluded during the reporting period.[72] For its part, CDC continued to provide training and technical assistance to maintain surveillance of EVD and other diseases of public health importance, and strengthen response capacity in the event of future outbreaks.[73]

USAID continued efforts to deactivate its West Africa Ebola Response DART, the lead U.S. Government coordinator for response efforts, during the reporting period as activities transitioned from emergency response to recovery.[74] The DART and corresponding Washington, D.C.-based Response Management Team formally stood down on January 4, 2016.[75] USAID's OFDA will continue to coordinate and manage humanitarian responses to the EVD outbreak through country program offices in Guinea, Liberia, and Sierra Leone.[76]

U.S. Government Recovery Efforts to Mitigate Second-Order Impacts

Food Security

USAID's Office of Food for Peace continued to closely coordinate with host governments, the UN World Food Program, and non-governmental organizations to respond to acute food insecurity brought on by the EVD outbreak in Guinea, Liberia, and Sierra Leone.[77] USAID staff met with beneficiaries and monitored various partners' program activities, including agricultural fairs, and cash transfer, food voucher, and school feeding

programs in Guinea, Liberia, and Sierra Leone during the quarter.[78] In addition, the U.S. Government encouraged school attendance through the provision of hot meals to children in schools in the most heavily-affected areas.[79] USAID's Ebola recovery school feeding programs in Guinea and Liberia resumed during the reporting period in conjunction with the start of the school year and reached more than 245,000 children in both countries.[80]

USAID-donated rice being distributed by the U.N. World Food Program in West Point, Liberia. (Morgana Wingard for USAID, September 19, 2014)

During the reporting period, USAID provided Catholic Relief Services with an additional $1.9 million to assist approximately 20,000 people affected by the economic effects of EVD with food vouchers in the Macenta and N'Zerekore prefectures of Guinea.[81] USAID also provided an additional $4.7 million to Mercy Corps to extend a cash transfer program in Liberia through 2016 to assist families affected by the economic effects of EVD.[82] Also in Liberia, USAID partner Project Concern International provided targeted cash transfers to more than 6,2000 beneficiaries in Bomi and Grand Cape Mount counties during the reporting period.[83] Meanwhile, USAID's Feed the Future program started the Liberia AgriBusiness Development Activity during the quarter to expand access to and use of agricultural inputs and post-harvest services for farmers.[84]

According to the USAID-funded Famine Early Warning Systems Network, food security conditions were expected to improve during the quarter in Sierra Leone with its main harvest taking place in October 2015 and the removal of restrictions on internal movement.[85] USAID partner ACDI/VOCA provided targeted cash transfers to more than 13,500 households in the country during the quarter while another USAID partner Save the Children provided targeted cash transfers to more than 6,400 households.[86] Subsequent monitoring by Save the Children reported that beneficiaries spent the majority of their assistance on food, followed by medical costs and school fees.[87] ACDI/VOCA also reported that during the quarter, groundnut yields from seeds distributed to beneficiaries in FY 2015 exceeded the national average in three of four target districts.[88]

Health Systems and Critical Non-Ebola Health Services

The EVD outbreak overwhelmed fragile healthcare systems in the most heavily-affected countries and the U.S. Government is supporting the overall restoration of basic health services in those countries. To restore the effectiveness of essential health services, the U.S. Government supported the training of healthcare workers on IPC techniques. In Guinea, the U.S. Government supported the restoration of basic health services at 112 facilities by providing IPC training for healthcare workers through government partners.[89] USAID supported the development of an IPC training curriculum, IPC training, and supervision in the country, while CDC continued to aid in the development of a national IPC policy and strategy and supported IPC action plans in recently affected prefectures.[90]

In Liberia, USAID supported basic health services in six counties through

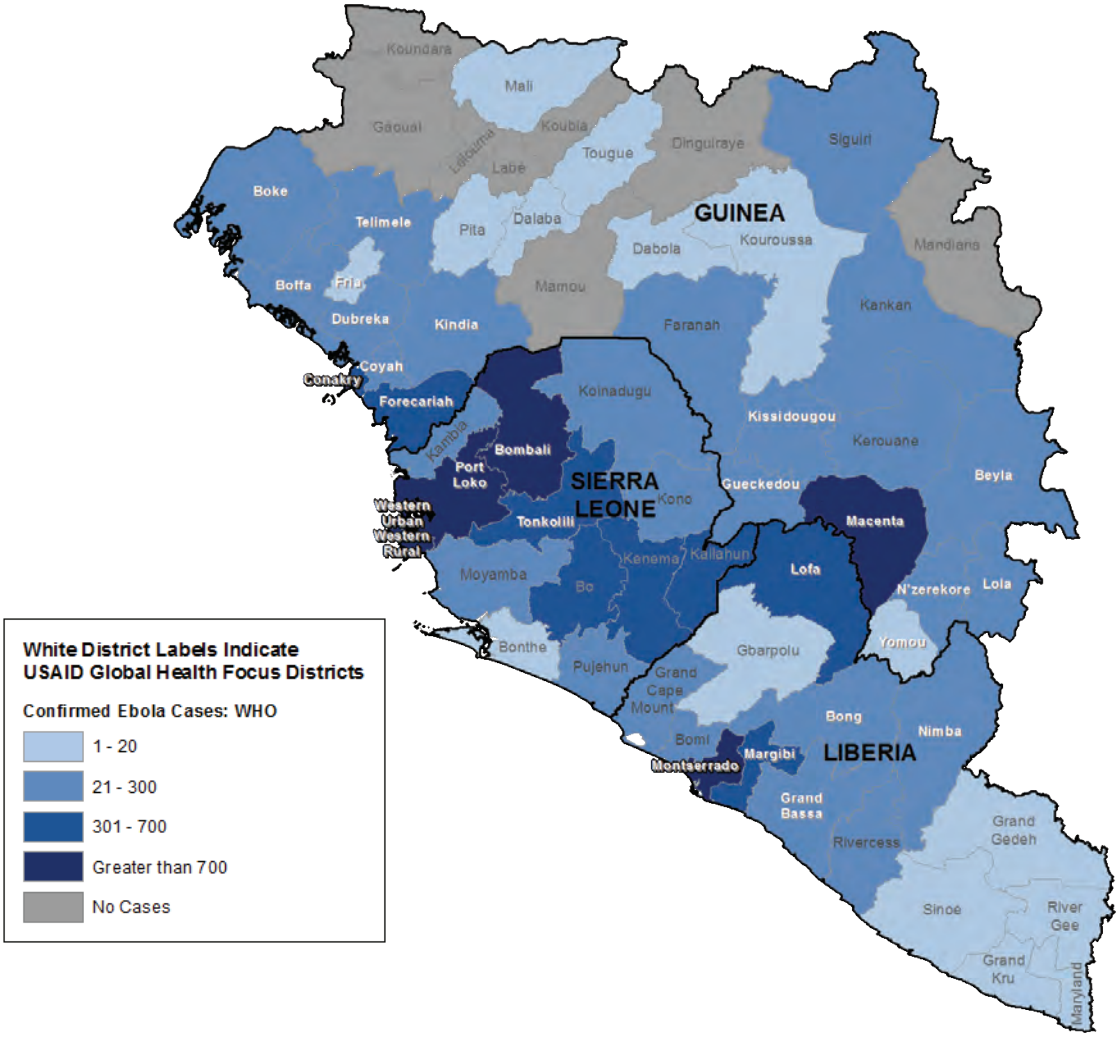


Figure 6. USAID Global Health Focus Districts in Guinea, Liberia, and Sierra Leone. (USAID, 2016)

A survivor wall at the Ebola Treatment Center in Kambia, Sierra Leone. (Photo by Jesse Wilson, October 12, 2015)

technical assistance to reopen primary healthcare facilities that provide routine maternal and child health services, completing baseline facility assessments at 61 health facilities, providing essential medicines to community clinics, and supporting immunization campaigns.[91] Meanwhile, CDC supported the development of a nationwide healthcare worker Safe and Quality Services training curriculum with a focus on IPC practices, and provided technical assistance to the Liberian MOH for the development of a new IPC quality management unit.[92] By the end of the reporting period, a CDC partner had facilitated this training to more than 1,000 healthcare workers at Liberian hospitals.[93] In Sierra Leone, CDC funded training on the country's National IPC Guidelines for 50 hospital and district workers in October 2015.[94]

To strengthen health service delivery, USAID took steps to improve public health supply chain management.[95] In Liberia, USAID provided technical assistance to quantify IPC commodities and improve warehouse management, while in Sierra Leone, USAID provided technical assistance to monitor and track supplies and essential medicines.[96]

USAID also supported social mobilization and behavior change activities to increase utilization of health services and promote healthy behaviors. During the quarter, USAID distributed a program guide for rebuilding trust to media groups in three districts in Guinea, introduced healthy behavior change learning content to Liberian communities via radio stations, and worked with community health workers in Sierra Leone to review and analyze Ebola data and experiences to determine best practices to be incorporated into policy and planning efforts.[97]

Assisting Ebola Survivors

WHO has estimated that there are approximately 17,000 EVD survivors living in West Africa.[98] Survivors of EVD have reported lingering health problems such as joint pain, headaches, visual problems, extreme fatigue, and mental health challenges.[99] According to WHO, survivors require routine healthcare services, such as antenatal care and vaccinations, as well as specialized medical support.[100] In addition, the virus has been documented to persist for a variable amount of time in survivors, which could possibly lead to transmission (e.g. sexual) or in rare cases relapse.[101] The Ebola virus or virus fragments, for example, have been detected in semen up to 9 months after disease onset and may be sexually transmitted to others.[102]

The PREVAIL III study, a collaboration between NIH, CDC, and the Government of Liberia, was launched in June 2015 to help understand the long-term consequences of the disease, characterize associated health problems, determine whether "survivors develop immunity that will protect them from future Ebola infection, and assess whether [survivors] can transmit Ebola infection to close contacts and sexual partners."[103] As of January 4, 2016, more than 1,788 individuals had been enrolled in the study.[104]

In Liberia and Sierra Leone, CDC supported health officials in implementing "voluntary semen screening and counselling programs for male survivors" in order to educate male survivors about transmission risks and encourage the necessary precautions to protect close contacts.[105]

According to WHO, 405 male survivors had utilized the semen screening services as of January 3, 2016.[106] The CDC-supported Men's Health Screening Program in Liberia, for example, offers semen testing and sexual risk reduction counseling to male survivors.[107] In Sierra Leone, CDC supported Project SHIELD, an effort led by the United Kingdom and the Government of Sierra Leone to register survivors, train healthcare workers and peer networks, provide sexual risk reduction counseling, and offer semen testing services to male Ebola survivors in Sierra Leone.[108] More than 650 male survivors had reportedly enrolled in the program as of December 14, 2015.[109]

CDC continued to work with partners in West Africa to support programs that helped address survivors' unique medical and psychological needs and reduce the risk of Ebola reintroduction.[110] For example, according to USAID, at least ten survivor clinics were operational in Liberia by early November 2015.[111]

Governance and Economic Crisis Mitigation

USAID reported that Guinea's economy faced austerity in government spending, a decline in Central Bank reserves, and anemic commodity prices.[112] Low commodity prices also impacted Liberia's economy.[113] The economy slowly recovered in Sierra Leone, as the mining sector and privately owned companies returned and restarted operations, however, high unemployment and inflation continued to pose challenges.[114]

During the quarter, the U.S. Government worked closely with Guinea, Liberia, and Sierra Leone to rebuild their economies. The Millennium Challenge Cooperation (MCC) signed a $257 million compact with Liberia on November 2, 2015, to modernize the country's power sector and strengthen its road maintenance systems.[115] MCC also signed a $44 million agreement with Sierra Leone to support policy reforms, build institutional capacity, and improve governance in the water and electricity sectors.[116]

Guinea held a presidential election on October 11, 2015, that resulted in the re-election of the incumbent.[117] According to USAID, issues with the registration of voters and distribution of voter identification cards, in addition to delays in issuing voting cards and setting up 14,800 voting centers, were challenges during the election.[118] Rioting and violence were reported in three districts, but observers reported that the election was largely free of major violence.[119] For the Guinean presidential election, USAID partner Search for Common Ground launched a radio project that reached an estimated three million persons of voting age to provide civic and voter education, encourage participation and acceptance of results, and prevent and mitigate violence.[120] USAID also supported the training and deployment of 72,405 polling station agents, 8,000 poll watchers, and 3,500 domestic observers to monitor the voting process.[121]

In Liberia, USAID concluded work in association with the Civil Society and Media Leadership activity by IREX, which had focused on strengthening communities, promoting resource accountability, and improving access to Ebola related information.[122] During the quarter, USAID also provided funding for UNICEF's Education Crisis Response Program, which is to distribute teaching and learning materials to 4,460 schools and build the capacity of teachers to provide psychosocial support to students.[123]

Although not directly connected to Ebola, USAID initiated new economic growth and governance activities in Liberia that were funded through the mission's ongoing development assistance budget.[124] Two of the activities focused on efforts to promote economic growth and two others had an emphasis on strengthening governance. The goal of Forest Incomes for Environmental Sustainability program is to provide economic opportunities

Healthcare workers in Forecariah, Guinea testing personal protective equipment from the Fighting Ebola Grand Challenge. (Photo by USAID, November 10, 2015)

that combat drivers of deforestation and biodiversity loss in communities, while the Kwendin Biomass Energy project is to generate renewable electricity for 250 households, public schools, churches, and small businesses in Kwendin Village in Liberia using biomass materials.[125] The USAID mission gave DAI an award for the Liberia Accountability and Voice Initiative in November 2015 to strengthen partnerships to advocate for and monitor policy and accountability reforms.[126] The mission also awarded the Carter Center the Liberia Access to Justice project in December 2015 to increase Liberian citizens' access to justice by providing legal information services, strengthening the capacity of traditional leaders, and supporting policy framework.[127]

Innovation and Communication Technology

During the quarter, USAID worked with WHO to strengthen health information systems (HIS) and improve information on patient use of health services.[128] According to USAID, improvements to HIS will better enable national MOHs and global responders "to identify future outbreaks and respond rapidly in a targeted way."[129] In Guinea, Liberia, and Sierra Leone, USAID worked with partner MEASURE Evaluation to provide technical assistance to health ministries for HIS strengthening and MEASURE Evaluation supported the MOH in all three countries with the development of HIS strategic plans to guide stakeholders' future HIS investments.[130] MEASURE Evaluation concluded the mapping of HIS technology systems in Liberia with the aim of informing future recommendations to strengthen HIS currently in use.[131] Similar work progressed in Guinea and Sierra Leone during the quarter.[132]

USAID also issued a Broad Agency Announcement for partnership ideas for improving HIS interoperability in West Africa received 111 submissions in October 2015.[133] As part of the process of identifying a final set of partnerships, the agency brought together 38 candidate partners at a November 2015 workshop that produced 15 HIS interoperability concept papers.[134] Working closely with other donors, USAID was reviewing

proposals during this reorting period to determine which presented the greatest impact opportunities for funding.[135]

In addition, USAID provided assistance to 14 innovations under the Fighting Ebola Grand Challenge.[136] During the reporting period, personal protective equipment innovators from Johns Hopkins University visited ETUs in Guinea to gain user feedback from healthcare workers.[137] Meanwhile, two USAID-supported innovations were tested in Liberia in November 2015: the TOMI Environmental Solutions, a decontamination solution and chamber, and Highlight, a colorized bleach solution developed by Columbia University.[138] The TOMI units were used to decommission an ETU and decontaminate the rooms at the ETU where the most recent EVD patients had stayed, while Highlight was tested at two ETUs.[139] Another USAID-sponsored innovation, the Drip Assist—a battery-powered intravenous infusion drip monitor—received FDA approval for human use.[140]

In Guinea, Liberia, and Sierra Leone, USAID worked with partner IntraHealth to expand and scale the use of mHero, a mobile platform developed for two-way communication between health managers and healthcare workers.[141] During the quarter, a baseline assessment of Liberia health worker capacity and knowledge of mHero was completed while a virtual learning course for the tool was in development.[142] In addition, IntraHealth worked with Liberia's MOH to create a healthcare facility registry that enables health information to be tied to specific health facilities.[143] Meanwhile in Sierra Leone, IntraHealth worked with the MOH on an agreement to responsibly share health information across key stakeholders.[144]

U.S. Government Efforts to Strengthen Global Health Security

Infectious disease pandemics represent a potent threat to humankind in terms of their potential for loss of lives and economic disruption, according to the Commission on a Global Health Risk Framework for the Future, and the threat of infectious diseases to global security will only grow.[145] The U.S. Ebola response and preparedness strategy includes efforts to strengthen global health security infrastructure in West Africa and other regions to prevent avoidable outbreaks of diseases like EVD, and to enable countries to detect threats and respond rapidly and effectively to future disease outbreaks.[146]

The U.S. Government supports the Global Health Security Agenda (GHSA), a partnership launched by the U.S. Government and 28 other countries, WHO, the UN Food and Agriculture Organization, and the World Organization for Animal Health in February 2014 "to advance a world safe and secure from infectious disease threats."[147] GHSA focuses on strengthening countries'

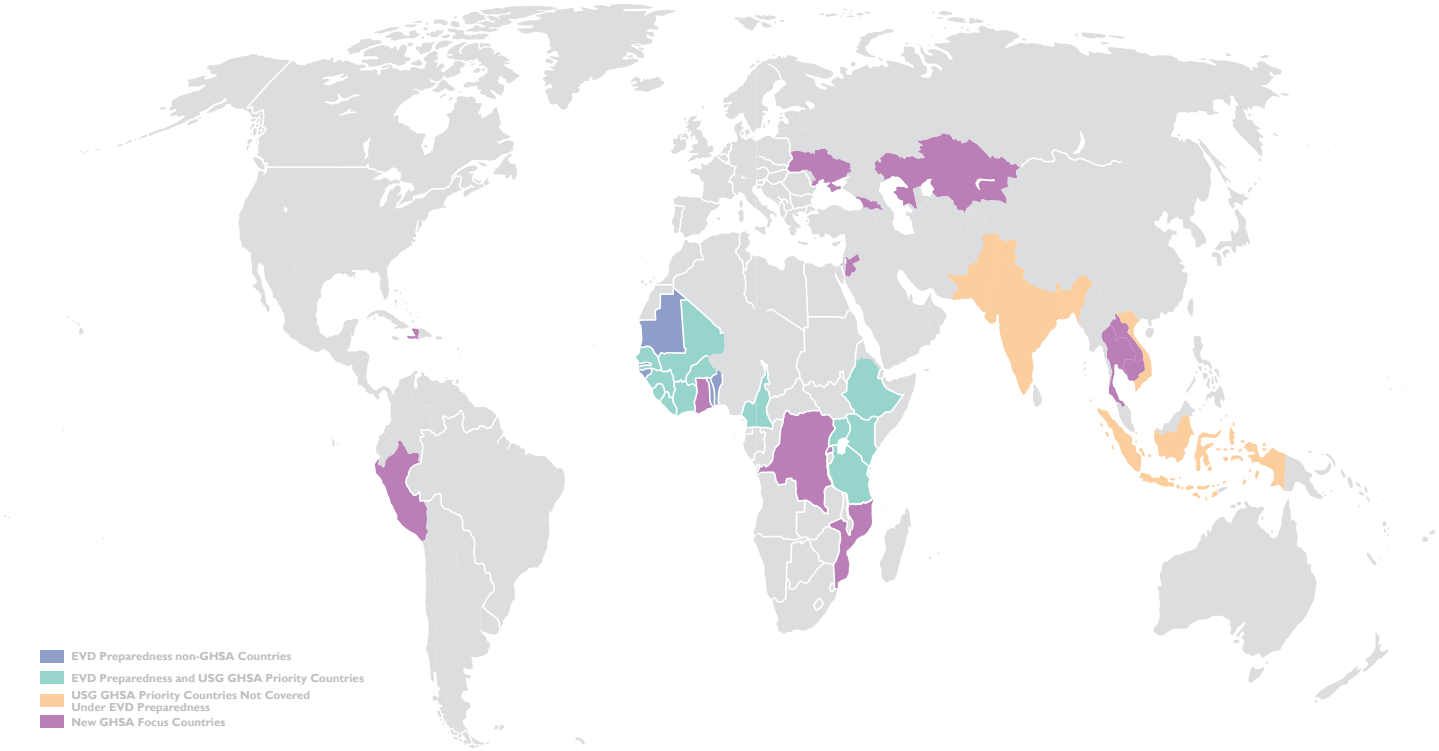


Figure 7. Map of EVD Preparedness and GHSA Countries for U.S. Government Support.

capacity to prevent, detect, and respond to infectious disease threats.[148]

The U.S. Government has committed to assisting at least 30 countries achieve GHSA objectives.[149] Initially, USAID, CDC, DoD, and other U.S. agencies coordinated activities in 17 GHSA focus countries, including Guinea, Liberia, and Sierra Leone, to develop 5-year country-specific roadmaps and work plans to implement GHSA activities.[150] Fifteen of the initial 17 countries completed their roadmaps and work plans, with Liberia finalizing its roadmap and work plan during the quarter.[151] Guinea and Sierra Leone continued the process of developing roadmaps and work plans, and are expected to complete them next quarter.[152] CDC reported that, at the end of the quarter, 91 percent of planned activities to implement GHSA objectives were on schedule.[153]

At the November 2015 G20 summit in Turkey, the U.S. Government announced 13 additional countries[*] as part of the next phase of its GHSA efforts.[154] GHSA activities in these additional countries are supported through existing programs and funding across U.S. agencies.[155]

CDC's activities to strengthen global health security during the quarter were focused around the development of public health capacity through the training of epidemiologists, support for the implementation of the GHSA independent assessment process, and work with WHO to align the GHSA and

[*] The 13 additional countries are: Cambodia, Democratic Republic of Congo, Ghana, Georgia, Haiti, Jordan, Kazakhstan, Laos, Mozambique, Peru, Rwanda, Thailand, and Ukraine.

International Health Regulations assessment processes.[156] CDC reported that it had trained 29 district and county surveillance officers in Liberia since July 2015 as part of its Field Epidemiology Training Program (FETP), and that a second cohort started the training in November 2015.[157] According to CDC, FETP provides the first line of defense to quickly contain future deadly disease outbreaks by expanding the country's capacity to quickly identify diseases.[158] FETP activities for Guinea and Sierra Leone were being planned during the quarter.[159] In December 2015, CDC conducted training for resident advisors to establish new FETP activities in 16 GHSA and EVD preparedness countries.[160]

In November 2015, USAID trained its health officers in Africa to provide information on GHSA and help participants better understand how GHSA activities align with their health and development portfolios.[161] USAID also supported the development and launch of a website for GHSA in December 2015, providing a platform for countries to publicly share information on their GHSA assessments, roadmaps, and strategies.[162]

Oversight Activities

Although requirements for oversight coordination and reporting under Section 8L of the Inspector General Act of 1978, as amended, concluded last quarter, the OIGs for DoD, DOS, HHS and USAID plan to continue to work together to provide coordinated oversight of international Ebola response and preparedness efforts. HHS OIG and USAID OIG also plan to continue to provide quarterly reporting on the progress of Ebola response, recovery, and preparedness efforts, focusing to a greater extent on oversight activities.

Table 3: OIG oversight activities by strategic oversight issue area and applicable U.S. strategic line of effort.

	Strategic Oversight Issue Areas			
U.S. Strategy Line of Effort	**Managing Financial and Procurement Processes**	**Executing Response Plans and Activities**	**Restoring Health Systems and Increasing Preparedness**	**Rebuilding Socioeconomic Sectors Impacted by the Outbreak**
Control the Outbreak	DoD, DOS, HHS, USAID	DoD, DOS, HHS, USAID	USAID	
Mitigate Second-Order Impacts	USAID		USAID	USAID
Build Coherent Leadership and Operations	USAID	HHS		
Strengthen Global Health Security	HHS, USAID		USAID	

This past quarter, these OIGs published a Joint Strategic Oversight Plan that included 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.[163] The participating OIGs identified four strategic issue areas for focused oversight attention: managing financial and procurement processes; executing response plans and activities; restoring health systems and increasing preparedness; and rebuilding socioeconomic sectors impacted by the outbreak.[164] Table 3 provides a breakdown of OIG oversight activities by strategic oversight issue area and applicable U.S. strategic line of effort.

U.S. Agency for International Development OIG

USAID OIG issued one audit of note prior to this reporting period. In late 2014, USAID OIG issued an audit on the USAID mission in Guinea's systems for ensuring appropriate oversight of 48 programs valued at about $135 million (Report No. 7-675-15-003-P). USAID OIG determined that USAID/Guinea had not managed the process for auditing its programs effectively and found that the mission did not verify whether some audits were performed and submitted on time, did not maintain a complete audit plan, and did not close out expired awards on time. USAID OIG made four recommendations to improve the management of USAID/Guinea's systems for ensuring appropriate oversight of funded programs and USAID has taken final action on each of USAID OIG's four recommendations.

USAID OIG also released an EVD-related audit during the reporting period:

- **Audit of Selected Ebola-Response Activities Managed by USAID's Office of U.S. Foreign Disaster Assistance in Liberia. (Report No. 7-669-16-002-P, December 4, 2015).**
  USAID's OFDA awarded partner, GC, a grant to assist Liberians with education to reduce EVD transmission and to support other activities. Initially based on a short-term grant made in August 2014, the program was extended four times and was valued at $32 million at the time of our fieldwork.

  USAID OIG found that social mobilization and case management activities were contributing to the success of Liberia's overall Ebola response because efforts were of sufficient scale and outreach workers had established relationships with leaders in the affected communities. Nonetheless, auditors noted that the implementer's performance measures were limited and sometimes the information derived from these measures was inaccurate; and the implementer's controls over $1.5 million in salary payments made in cash were questionable. Additionally, OIG auditors noted that OFDA did not always document program

monitoring or verify reported results, nor did it start to develop transition plans for key assets, such as the program vehicles valued at $6 million. Moreover, OFDA had not formalized a handover plan for a key burial site.

To address these issues, OIG made seven recommendations and OFDA agreed with all seven. OFDA made management decisions on all of them and took final action for one recommendation. However, USAID OIG disagreed with OFDA's management decision on two recommendations. For the recommendation that OFDA, in coordination with GC, implement procedures to identify and monitor performance indicators that measure program effectiveness, OFDA decided the program had identified relevant output and outcome indicators that collectively measured program effectiveness. However, USAID OIG disagreed that the program indicators collectively measured program effectiveness.

USAID OIG also recommended that OFDA, in coordination with GC, implement procedures to improve controls over payments to burial and disinfection team members by depositing salaries directly in bank accounts when possible or confirming team members' identities with identification cards. OFDA determined that given the circumstances and the impact of specific Liberian laws, the implementer's controls over salary payments in cash were sufficient to mitigate the risk over inaccurate payments. However, USAID OIG disagreed that controls observed during the audit for cash payments mitigate the risk identified.

As for the remaining OIG recommendations, OFDA had developed corrective action plans to address the other noted issues.

USAID OIG had five additional audits underway that relate to USAID's Ebola response and recovery efforts. This work is being conducted by the Regional Inspector General office in Dakar, Senegal, and by the Performance Audits Division based in Washington, D.C.

- **Audit of USAID's Awards for the Ebola Response.**
  This audit will provide an overview of how USAID selected awards in response to a rapidly moving crisis. The audit will determine whether the acquisition and assistance instruments USAID chose were suitable for the Ebola response, and whether USAID made and modified the awards appropriately for implementing USAID's Ebola response strategy

- **Audit of USAID's Management of Medical Commodities Provided in Response to the Ebola Outbreak.**

  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 USAID/Food for Peace's Response to the Ebola Crisis in West Africa.**
  According to a UN Food and Agriculture Organization and World Food Program report, as of December 2014, approximately 500,000 people in Guinea, Liberia, and Sierra Leone were experiencing severe food insecurity as a result of the Ebola 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 audit will determine whether select USAID/Food for Peace programs were 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 Commodity Care Centers in Liberia and Sierra Leone.**
  This audit will determine whether USAID/OFDA was effectively managing and utilizing 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 poor, or 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.

- **Audit of Selected USAID/OFDA-Funded Training of Healthcare Workers in Ebola Affected Countries.**
  This audit will determine whether USAID/OFDA is achieving its goal to train and prepare healthcare workers to prevent the spread of Ebola through proper healthcare practices. The audit covers six implementers who provided training in FY 2015 on infection prevention and control practices to government officials and healthcare workers. Since the audit covers six implementers working in Liberia, Sierra Leone, and Guinea, the audit team is conducting the fieldwork in phases. Phase I was completed in the first quarter of FY 2016 and Phase II will take place in the second quarter of FY 2016.

Given USAID's changing priorities, USAID OIG is revising its planned FY 2016 performance audit work for the Ebola response. For its financial audit work, however, USAID OIG intends to 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 reported in a separate product with a specific focus on the testing of awards related to Ebola response, recovery, and preparedness efforts.

Department of Health and Human Services OIG

HHS OIG has an ongoing Office of Evaluations and Inspections review related to EVD. Its Office of Audit Services is planning one audit of international activities and will also conduct financial verification related to the agency's EVD expenditures. As of December 31, 2015, HHS OIG had one review underway.

- **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.

In addition, HHS OIG has developed plans to start two reviews related to the Ebola response and preparedness efforts in 2016.

- **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, with $603 million for international Ebola response and preparedness activities in the current three epidemic and high priority countries, including neighboring countries.

The objective of this review will be to determine whether CDC awarded Ebola related funds in FY 2015 in compliance with federal and departmental regulations.

- **Review of Ebola Coordination of Roles and Responsibilities and Operational Effectiveness.**
  At the start of the Ebola outbreak, coordination and response planning were weak among the international partners. Within HHS, certain divisions received Ebola funding to aid in the implementation of their Ebola response activities. HHS OIG will focus this review on preparation and coordination of its Ebola response activities within each of its divisions. In addition, HHS OIG will review how HHS's Ebola response efforts interfaced within the

  U.S. government's strategic Ebola response effort.
  The objective of this audit is to determine whether HHS adequately planned and effectively coordinated the Department's overall Ebola response activities.

Department of Defense OIG

- **DoD OIG released an EVD-related audit during the reporting period. Army Needs to Improve Contract Oversight for the Logistics Civil Augmentation Program's Task Orders. (Report No. DODIG-2016-004, October 28, 2015).**

  The audit objective was to determine whether the Army was providing sufficient contract oversight for Logistics Civil Augmentation Program (LOGCAP) task orders issued to support Operation United Assistance. Specifically, DoD OIG determined whether the Army appointed an adequate number of contracting officer's representatives (CORs); CORs were appropriately trained and appointed; and CORs had sufficient quality assurance plans. DoD OIG nonstatistically selected and reviewed quality assurance files for 6 of the 21 CORs appointed to oversee the contractor's work.

  Although the Army appointed an adequate number of CORs to oversee the task order, the Army did not ensure the CORs provided sufficient oversight for the $33.8 million LOGCAP task order issued to support Operation United Assistance. Specifically the:

  - 414th Contracting Support Brigade officials appointed four of the six CORs without the required training. This occurred because the 414th Contracting Support Brigade officials accepted the risk of not having sufficiently trained CORs.

- Army Contracting Command-Rock Island procurement contracting officer (PCO) did not develop a Quality Assurance Surveillance Plan as required by Federal Acquisition Regulation subpart 46.4. This occurred because the PCO believed she was not responsible for developing the Quality Assurance Surveillance Plan and instead provided four documents that did not meet the Federal Acquisition Regulation requirements for a Quality Assurance Surveillance Plan.

As a result, the six CORs in the sample could not perform comprehensive reviews of contractor performance, increasing the risk that the Army paid for goods or services that did not meet contract performance standards. DoD OIG also identified that on at least 2 of the 11 sites, the contractor began work before CORs were on site to perform contractor surveillance. As a result, the contractor performed a total of 26 days of work without COR oversight.

DoD OIG recommended the Commander, 414th Contracting Support Brigade, Principal Assistant Responsible for Contracting (PARC) develop procedures that require experienced CORs be identified before contractor work begins; the CORs to be trained before deployment; and CORs to be provided adequate guidance to perform their duties. DoD OIG further recommended the Commander develop procedures that outline alternate contractor surveillance methods if the CORs cannot perform contractor surveillance until they are on site. DoD OIG also recommended the Executive Director and PARC for the Army Contracting Command-Rock Island issue guidance that requires all PCOs to create a Quality Assurance Surveillance Plan specific for each LOGCAP-issued task order.[165]

Department of State OIG

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

- **Audit of Aeromedical Biological Containment Evacuation Contracts Within the Office of Medical Services.**
  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-Department of State medical evacuations as required.

Department of Homeland Security OIG

DHS OIG had two ongoing audits at the end of the reporting period.

- **Audit of DHS Ebola Response.**
  This audit was designed to determine if DHS has effectively implemented enhanced screening measures for a response to an Ebola outbreak.[166]

- **Audit of DHS Pandemic Planning and Response.**
  This audit is to determine if DHS has implemented adequate preparedness plans to continue mission-essential functions during a pandemic.[167]

Figure 8. Ebola hotline poster by USAID OIG. (USAID OIG, 2014)

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.

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.[168]

Investigations

In addition to audits, evaluations, and reviews of U.S. Government activities associated with Ebola preparedness and response, the oversight community conducts investigations into corresponding allegations. Two USAID OIG investigations remained open and ongoing at the end of the quarter (one was opened this quarter and one continued from the previous quarter) and one investigation was closed.

Appendix A: Selected Ebola Diagnostic Tools and Medical Countermeasures Supported by U.S. Government Agencies

Product	U.S. Agencies	Status
Diagnostic Tools		
CDC Ebola Virus NP Real-time RT-PCR Assay By CDC	CDC	Authorized for use in the U.S. by FDA under Emergency Use Authorization.
CDC Ebola Virus VP40 Real-time RT-PCR Assay By CDC	CDC	Authorized for use in the U.S. by FDA under Emergency Use Authorization.
EZ1 Real-time RT-PCR Assay By DoD	DoD	Authorized for use in the U.S. by FDA under Emergency Use Authorization.
Next Generation Diagnostics System Increment 1 Film Array BioThreat-Ebola (BT-E) Assay By BioFire Defense	DoD Chemical and Biological Defense Program, NIH/NIAID	Authorized for use in the U.S. by FDA under Emergency Use Authorization.
OraQuick® By OraSure Technologies	ASPR/BARDA, CDC	Authorized for use in the U.S. by FDA under Emergency Use Authorization. Pilot projects in Guinea, Liberia, and Sierra Leone.
ReEBOV™ Antigen Rapid Test By Corgenix	NIH/NIAID	Authorized for use in the U.S. by FDA under Emergency Use Authorization.
Xpert Ebola Assay By Cepheid	NIH/NIAID	Authorized for use in the U.S. by FDA under Emergency Use Authorization.
Vaccines		
cAd3-ZEBOV By GlaxoSmithKline and NIAID	ASPR/BARDA, NIH/NIAID	Preliminary results from Phase I studies reported, while enrollment for PREVAIL I study completed.[1*]

rVSV-ZEBOV By NewLink Genetics and Merck Vaccines USA	ASPR/BARDA, CDC, DoD Joint Science and Technology Office (JSTO), NIH/NIAID	Preliminary results from Phase I studies reported. Enrollment for PREVAIL I study completed. Enrollment and vaccination for STRIVE completed on December 12, 2015. Exploring expanded PREVAIL I Phase II safety and immunogenicity study in comparison to Ad26.ZEBOV/MVA-BN Filo boost in 2016.[2**]
Ad26.ZEBOV prime and MVA-BN Filo boost By Johnson & Johnson and Bavarian Nordic	ASPR/BARDA, NIH/NIAID	Exploring expanded PREVAIL I Phase II safety and immunogenicity study in comparison to rVSV-ZEBOV in 2016.
HPIV3/EboGP By NIAID	NIH/NIAID	Phase I clinical trial underway.
Rabies-EBOV By NIAID and Thomas Jefferson University	NIH/NIAID	Phase I clinical trial anticipated to begin in 2016.
rVSVN4CT1 EBOV By Profectus	NIH/NIAID	Phase I clinical trials to evaluate safety and immune response of both Zaire Ebola component vaccine and complete trivalent (Zaire Ebola, Sudan Ebola, and Marburg) vaccine scheduled for this quarter. Phase I trial of the trivalent scheduled for March 2016.
Therapeautic Treatments		
ZMapp By Mapp Biopharmaceuticals	ASPR/BARDA, DoD JSTO, NIH/NIAID	PREVAIL II trial comparing optimized standard of care to optimized standard of care plus ZMapp ongoing.
BCX-4430 By Biocryst	ASPR/BARDA, NIH/NIAID	Phase I trials enrolling participants.

Sources: DoD and HHS

Appendix B: USAID Ebola-related Programs by Pillar and Geographical Focus as of December 31, 2015 (Unaudited)

The table contains Ebola response and preparedness program information provided by USAID. In addition to information regarding the strategiwc 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 December 31, 2015, are not included, nor are programs for which complete award and period of performance information were unavailable. 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
Control the Outbreak						
Regional						
Food for Peace	Provide in-kind food assistance to Ebola patients, survivors, contacts, and quarantined communities	World Food Program	34,567,229	34,567,229	9/9/2014	12/31/2015
OFDA	Fund third-party study of the international Ebola outbreak and response	Overseas Devel-opment 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
OFDA	Support for the coordination of agencies involved in the response at international, national, local government and community levels	WHO	477,712	477,712	1/1/2015	3/31/2016
Guinea						
OFDA	Support for contact tracing efforts and follow up with Ebola survivors	Accion Contra el Hambre	1,681,043	1,681,043	8/1/2015	4/30/2016

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 training of health facility staff in IPC and triage protocols, and the provision of basic materials to improve hygiene and adherence to IPC practices	Catholic Relief Services	1,846,005	1,846,005	7/23/2015	4/30/2016
OFDA	Support community response planning for future EVD outbreaks in lower Guinea through risk management and water, sanitation, and hyiene 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	Support outreach activities and maintain Forecariah ETU and transit center	French Red Cross	680,000	680,000	12/1/2014	2/29/2016
OFDA	Collaborate with the emergency operations center, MOH, and other stakeholders to reorient the overall Ebola communication and social mobilization strategy, and work with communities on Ebola messaging and dissemination	Health Communication Capacity Collaborative	1,000,000,	1,000,000	4/1/2015	12/31/2015

OFDA	Collaborate with the emergency operations center, MOH, and other stakeholders to reorient the overall Ebola communication and social mobilization strategy, and work with communities on Ebola messaging and dissemination	Johns Hopkins University Center for Communication Programs	1,000,000	1,000,000	4/1/2015	12/31/2015
OFDA	Provide support for safe burials, social mobilization, and training of Ebola response workers	International Federation of Red Cross and Red Crescent Societies	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 centers, procure and pre-position personal protection equipment kits, train volunteers on the use of personal protection equipment, train 60 supervisors and 1,250 volunteers on EVD signs and symptoms, prevention measures and referral mechanisms	International Federation of Red Cross and Red Crescent Societies	1,000,000	1,000,000	9/26/2014	12/31/2015
OFDA	Establish regional Ebola coordination hub in Conakry and support for Ebola coordinator	International Federation of Red Cross and Red Crescent Societies	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	International Medical Corps	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
OFDA	Construct and support 18 provincial emergency operations centers to strengthen command and control of the Ebola response	International Organization for Migration	3,492,220	3,492,220	12/19/2014	1/15/2016
OFDA	Rehabilitate and equip provincial emergency operations centers in Guinea	International Organization for Migration	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 emergency operations centers	International Organization for Migration	300,000	300,000	12/19/2014	1/15/2016
OFDA	Support non-governmental organizations to build the capacity and resilience of Guinean communities throughout EVD prevention, response and recovery phases	International Organization for Migration	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	International Organization for Migration	5,475,000	5,475,000	5/22/2015	2/29/2016

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	Ensure availability of hand washing kits in schools in 18 prefectures	UNICEF	4,555,047	4,555,047	3/20/2015	12/31/2015
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	Collaborate with the MOH to identify IPC gaps in targeted hospitals and health centers, and develop capacity building plan to ensure comprehensive IPC	Women and Health Alliance International	749,936	749,936	8/17/2015	2/16/2016
OFDA	Provide logistics and supply chain capabilities to UN Mission for Ebola Emergency Response, and provide of humanitarian air services and strategic airlift via UN Humanitarian Air Service	World Food Program	6,000,000	6,000,000	11/12/2014	12/31/2016
OFDA	Build two ETUs	World Food Program	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	World Food Program	1,000,000	1,000,000	11/12/2014	12/31/2016

OFDA	Promote healthcare worker training and adequate personal protective equipment supplies to health facilities in 10 prefectures	WHO	19,626,849	19,626,849	4/1/2015	2/28/2016
Liberia						
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	CONCERN	6,806,343	6,806,343	11/1/2014	12/31/2015
OFDA	Rehabilitate and construct seven community care centers 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	Support for oral swabbing for Ebola and strengthen county and district health workers' capacity	Global Communities	1,963,455	1,963,455	8/13/2014	4/30/2016
OFDA	Support ETU and health facilities and decommissioning activities in Lofa, Liberia	GOAL	2,578,833	2,578,833	11/1/2014	2/29/2016
OFDA	Management of Voinjama ETU and of the triage area of Voinjama's Tellewoyan Hospital	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 eight months and Margibi ETU for six months	International Medical Corps	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	International Medical Corps	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	International Medical Corps	5,934,800	5,934,800	10/8/2014	12/31/2015
OFDA	Support the operation of ETU in Bong	International Medical Corps	4,906,604	4,906,604	8/29/2014	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
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	International Rescue Committee	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	International Rescue Committee	4,093,690	4,093,690	9/1/2014	12/31/2015

OFDA	Provide clinical care to EVD patients in Monrovia	International Rescue Committee	10,402,487	10,402,487	10/1/2014	12/31/2015
OFDA	Support for Redemption Hospital	International Rescue Committee	1,695,100	1,695,100	10/1/2014	3/31/2016
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
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 community care centers, 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 community care centers, 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	Construct and manage 10 community care centers in Nimba and Bong, Liberia	Project Concern International	4,128,390	4,128,390	10/29/2014	12/31/2015
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
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 water, hygiene, and sanitation supplies to ETUs and community care centers	UNICEF	38,903,661	38,903,661	12/9/2014	6/30/2016
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

OFDA	Support personal protective equipment deployment and provide supply chain management and logistics support for ETUs and community care centers through warehousing, transportation, and inventory tracking and management	World Food Program	12,268,192	12,268,192	10/15/2014	12/31/2015
OFDA	Support personal protective equipment deployment and provide supply chain management and logistics support for ETUs and community care centers through warehousing, transportation, and inventory tracking and management	World Food Program	45,008,916	45,008,916	10/15/2014	12/31/2015
OFDA	Support personal protective equipment and logistics pipeline, IPC training, county-level surveillance and coordination, transport system for EVD lab samples, and psychosocial activities	WHO	35,000,000	35,000,000	3/25/2015	3/31/2016
Sierra Leone						
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	International Federation of Red Cross and Red Crescent Societies	3,500,000	3,500,000	12/5/2014	12/31/2015

OFDA	Manage ETU in Kono and create rapid response capacity to respond to Ebola events in remote communities	International Federation of Red Cross and Red Crescent Societies	6,000,000	6,000,000	12/5/2014	12/31/2015
OFDA	Manage two ETUs in Port Loko and Kambia districts, Sierra Leone	International Medical Corps	7,772,793	7,772,793	10/1/2014	12/31/2015
OFDA	Manage ETU and provide psychosocial support and community outreach to Ebola-affected communities in Port Loko district, Sierra Leone	International Medical Corps	5,164,183	5,164,183	10/1/2014	12/31/2015
OFDA	Support for ETU in Kambia, Sierra Leone	International Medical Corps	439,597	439,597	10/1/2014	2/29/2016
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 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 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	International Rescue Committee	2,729,036	2,729,036	8/1/2015	12/31/2015

OFDA	Train healthcare workers on IPC at 1100 health facilities in Sierra Leone	IRC	5,374,738	5,374,738	7/1/2015	12/31/2015
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
OFDA	Manage ETU and support for community outreach, psychosocial support, and active case-finding in Kontorlah, Sierra Leone	MEDAIR, 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	MEDAIR, 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 community care centers, 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	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 UN Humanitarian Air Service, transport and mobile warehousing units for EVD response supplies, and specimen transport	World Food Program	10,000,000	10,000,000	1/29/2015	12/31/2015
OFDA	Support IPC supervision at non-Ebola healthcare facilities and maintain Ebola surveillance activities in all districts of Sierra Leone	WHO	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	WHO	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
Mitigate Second Order Impacts of the Crisis						
Regional						
Food for Peace	Support for early warning, analysis, and reporting on acute food insecurity	Chemonics/ Famine Early Warning Systems Network	2,874,194	2,865,965	9/15/2015	3/3/2017
Food for Peace	Nutritional support for acutely malnourished children	UNICEF	3,935,510	3,374,348	6/22/2015	6/21/2016
Food for Peace	Food assistance for EVD-affected Ivorian returnees from Liberia and host communities in Cote d'Ivoire	World Food Program	3,000,000	3,000,000	4/1/2015	12/31/2015

Global Development Lab	Accra Data Harmonization Summit (May 18-22, 2015 in Accra, Ghana) focused on health information sharing policies, tools and standards to improve the region's ability to respond to current and future outbreaks. This four-day technical workshop was implemented in collaboration with the West African Health Organization and USAID/West Africa, bringing together decision makers, thought leaders, and implementers to advance a common agenda on data harmonization for health information systems interoperability in the West Africa region. Results of the conference included the creation of action plans for health information systems development in West Africa, and commitments from governments to invest in health information systems and digital infrastructure.	Carolina Population Center at UNC, Chapel Hill	142,381	142,381	7/1/2015	6/28/2019

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
Global Development Lab	Learning agenda focused on the use of data and digital technologies in the crisis response. This work will result in the publication of a series of papers and a final report that will identify actionable recommendations on the use of data and digital systems in future response efforts.	FHI 360	100,000	100,000	9/30/2012	9/29/2017

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 information communications technology policy to implement health information system in Liberia	NetHope	13,769	13,769	9/30/2015	9/29/2020
Global Development Lab	Analysis of information communications technology issues and challenges during the Ebola outbreak in the Ebola affected countries, and provide recommendations for Ebola recovery work	United Nations Foundation	996,389	996,389	10/1/2014	9/30/2019
Global Development Lab	Embed health advisor in the region to analyze the existing mHealth 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 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, short message service 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 personal protective equipment for frontline health workers and design new personal protective equipment for community and family care	Johns Hopkins University	793,635	793,635	9/26/2012	9/25/2017

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	482,231	482,231	6/10/2015	2/10/2016
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 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
Guinea						
Food for Peace	Provide food vouchers for emergency food assistance and market support	Catholic Relief Services	3,252,935	1,325,443	2/24/2015	9/30/2016

Food for Peace	Support for Ebola emergency and recovery school feeding program	WORLD FOOD PROGRAM	7,182,907	7,182,907	3/25/2015	12/31/2016
Global Development Lab	Embed two expert advisors in the Guinea Ministry of Health to provide dedicated technical and organizational support and training, and to accelerate the development and integration of interoperable and sustainable digital platforms in national health information systems	Carolina Population Center at the University of North Carolina Chapel Hill	500,000	500,000	7/1/2014	6/28/2019
Global Health	Increase the availability and quality of health service delivery data, and institutionalize data-driven decision-making	Carolina Population Center at the University of North Carolina, Chapel Hill	2,000,000	2,000,000	7/1/2014	6/30/2019
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 Center for Communication Programs	5,500,000	5,500,000	9/26/2012	9/25/2017
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
Liberia						
Food for Peace	Support targeted cash transfers, cash-for-work, and agricultural input vouchers for emergency food assistance and market recovery	ACDI/VOCA	9,000,000	8,999,973	3/17/2015	6/9/2016

Food for Peace	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
Food for Peace	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
Food for Peace	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
Food for Peace	Support for Ebola emergency and recovery school feeding program	World Food Program	7,370,323	7,370,323	4/22/2015	10/31/2016
Food for Peace	Support relief and recovery operation for EVD-affected Ivorian refugees	World Food Program	8,921,600	8,921,600	3/7/2014	4/30/2016
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 MOH, 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 in country health information systems	Carolina Population Center at UNC, Chapel Hill	500,000	500,000	7/1/2014	6/28/2019
Global Development Lab	Develop Liberia's information and communications technology capacity to better respond to future disease outbreaks by strengthening policy, infrastructure, connectivity in the country	NetHope	80,377	80,377	9/30/2015	9/29/2020
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	Restore routine health services, increase utilization of health services, and expand health worker capacity and capability	International Rescue Committee and Partners	7,000,000	7,000,000	2/23/2015	2/22/2020
Global Health	Support social mobilization and behavior change communication at the national and sub-national levels	Johns Hopkins University Center for Communication Programs	2,600,000	2,600,000	9/26/2012	9/25/2017
Global Health	Strengthen routine immunization services and capacity	UNICEF	2,000,000	2,000,000	9/1/2007	9/1/2020

Sierra Leone						
Food for Peace	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
Food for Peace	Support targeted cash transfers for emergency food assistance and market recovery	CARE	2,769,546	2,769,546	8/15/2015	11/15/2016
Food for Peace	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
Food for Peace	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
Food for Peace	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
Global Development Lab	Embed two expert advisors in the Sierra Leone MOH to provide dedicated technical and organizational support and training, and assist in accelerating the development and integration of interoperable and sustainable digital platforms in country health information systems	Carolina Population Center at the University of North Carolina Chapel Hill	500,000	500,000	7/1/2014	6/28/2019

Global Devel-opment Lab	Support the implementation of mHero, a two-way communication and information sharing tool, in Sierra Leone at the national and sub-national level	Intra Health	250,000	250,000	6/9/2015	6/8/2016
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
Global Health	Support social mobilization and behavior change communication at the national and sub-national levels	Johns Hopkins University Center for Communication Programs	5,000,000	5,000,000	9/26/2012	9/25/2017
Global Health	Restore basic health services	JSI Research and Training Institute	5,000,000	15,000,000	10/1/2012	9/30/2017
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 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
Strengthen Global Health Security						
Regional						
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 Population Center at the University of North Carolina Chapel Hill	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 Agri-culture Organiza-tion	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 Corpo-ration	1,500,000	1,500,000	3/1/2014	3/1/2019
Global Health	Strengthen the capacity of country health communication programs to detect and respond to epidemic-prone diseases such as Ebola	Johns Hopkins University Center for Communica-tion Programs	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 personal protective equipment for health staff and outbreak investigators	WHO, WHO Regional Office for Africa	12,787,500	12,787,500	9/1/2009	9/1/2016
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

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 C: Acronyms

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
CDC	Centers for Disease Control and Prevention, U.S. Department of Health and Human Services
CORs	Contracting Officers Representatives
DART	Disaster Assistance Response Team, 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
ETU	Ebola Treatment Unit
EVD	Ebola Virus Disease
FDA	Food and Drug Administration, U.S. Department of Health and Human Services
FETP	Field Epidemiology Training Program
FY	Fiscal Year
GAO	Government Accountability Office
GC	Global Communities
GHSA	Global Health Security Agenda
HHS	U.S. Department of Health and Human Services
HIS	Health Information Systems
IOM	International Organization for Migration
IPC	Infection prevention and control
JSTO	Joint Science and Technology Office, U.S. Department of Defense
LOGCAP	Logistics Civil Augmentation Program
MCC	Millennium Challenge Corporation

MOH	Ministry of Health
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
OFDA	Office of Foreign Disaster Assistance, U.S. Agency for International Development
OIG	Office of Inspector General
PARC	Principal Assistant Responsible for Contracting
PCO	Procurement Contracting Officer
PREVAIL	Partnership for Research on Ebola Virus in Liberia
RDT	Rapid Diagnostic Tests
RRT	Rapid Response Team
STRIVE	Sierra Leone Trial to Introduce a Vaccine Against Ebola
UN	United Nations
UNICEF	United Nations Children's Fund
USAID	U.S. Agency for International Development
WHO	World Health Organization

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1-800-HHS-TIPS (1-800-447-8477)