OFFICE OF INSPECTOR GENERAL

AUDIT OF USAID/EAST AFRICA'S MATERNAL AND CHILD HEALTH PROGRAM IN BURUNDI

AUDIT REPORT NO. 4-695-13-009-P
JULY 26, 2013

PRETORIA, SOUTH AFRICA

Office of Inspector General

July 26, 2013

MEMORANDUM

TO: Mission Director, USAID/East Africa, Richard J. Goughnour

FROM: Regional Inspector General/Pretoria, Robert W. Mason /s/

SUBJECT: Audit of USAID/East Africa's Maternal and Child Health Program in Burundi (Report No. 4-695-13-009-P)

This memorandum transmits our final report on the subject audit. We have considered carefully your comments on the draft report and have included them in their entirety (without attachments) in Appendix II.

The report includes two recommendations to strengthen USAID/East Africa's Maternal and Child Health Program in Burundi. We acknowledge management decisions on both recommendations. Please furnish the necessary documentation to the Office of Audit Performance and Compliance Division to achieve final action on Recommendations 1 and 2.

I want to express my sincere appreciation for the cooperation and courtesy extended to my staff during the audit.

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SUMMARY OF RESULTS

Burundi is a landlocked country bordered by the Democratic Republic of the Congo, Rwanda, and Tanzania. Slightly smaller than Maryland, Burundi is one of the world's poorest nations. After a 12-year civil war between Hutu and Tutsi factions decimated the country's already inadequate health systems, the health of Burundi's 10.9 million people deteriorated even further. Burundian women and children were particularly hard-hit. As a result, the country's maternal and child health statistics are among the worst in the world, as shown in the table below.

Table 1. Selected Maternal and Child Health Statistics for Burundi (Unaudited)

Statistic	Value	Global Ranking
Birth rate	40.04 births/1,000 population (2013 est.)	7
Maternal mortality rate	800 deaths/100,000 live births (2010)	5
Infant mortality rate	58.86 deaths/1,000 live births (2013 est.)	26
Total fertility rate	5.99 children born/woman (2013 est.)	6
Children younger than 5 who are underweight	35.2 percent (2005)	7

Source: *The World Factbook.*

The high maternal mortality rate is a result of complications arising during pregnancy and childbirth, and early and frequent pregnancies. Malaria, diarrhea, and respiratory infections, along with malnutrition, are the main causes of death among children. Limited access to adequate sanitation facilities and safe drinking water are other contributing factors.

Burundi is now trying to rebuild its infrastructure, including its health-care system, to improve the lives of its citizens. USAID is helping Burundi by focusing on improving maternal and child health in two provinces, Kayanza and Muyinga.

To this end, in October 2007 USAID/East Africa started the Maternal and Child Health Program in Burundi. The program's goals are to increase the quality of maternal and child health services, prevent and treat childhood illnesses, and improve maternal and childhood nutrition. The keys to achieving these goals include high-impact interventions, such as increasing the use skilled birth attendants during childbirth, providing immunizations, and distributing vitamin A supplements, that address the major causes of maternal and child mortality. In addition, the program also aims to educate the community and improve the skills of health-care workers.

Pathfinder International has been implementing the program since its inception through a cooperative agreement with USAID. The program was extended to March 31, 2013. The total estimated cost of the agreement was $11.1 million. As of March 31, 2013, $10.5 million in USAID funds had been spent. A 6-month, $750,000 follow-on arrangement with Pathfinder through a field support mechanism is in place until September 30, 2013. This was done to avoid any discontinuation in maternal and child health services in Burundi until procurement of a new integrated health project is complete.

The Regional Inspector General/Pretoria (RIG/Pretoria) conducted this audit to determine whether USAID/East Africa's Maternal and Child Health Program in Burundi was achieving its main goal of improving maternal and child health.

The audit found that the program generally was achieving that goal. Before it began, the number of women having their babies at home without any assistance was high, contributing to Burundi's dismal maternal mortality rate. To combat this, the program emphasized the importance of having a skilled birth attendant present at delivery and trained more than 3,000 health-care providers in fiscal year (FY) 2011 in emergency obstetrics, safe delivery, and antenatal care. In addition, the program trained community health workers to identify pregnant women in potentially dangerous situations and refer them to health facilities. These workers also encouraged women to deliver their babies at a nearby health facility. According to an internal evaluation, the efforts helped increase the percentage of births attended by a skilled birth professional (such as a doctor, nurse, or midwife) by 11 percent.

Children's nutrition also improved. The program created a community outreach group called Light Mothers to address acute child malnourishment. This group used trained volunteers to identify at-risk infants and teach mothers about proper nutrition and hygiene. This activity has contributed to a drop in the percentage of severely underweight infants in Kayanza and Muyinga from 23 percent to 13 percent.

However, the audit identified the following areas for improvement.

- Some incubators and renovated wards were not being used (page 3). Employees at one hospital were not trained to use the incubators. Another hospital did not receive all the equipment necessary to use the incubators or furnish the renovated areas.

- Some reported results were not accurate (page 5). Those for two indicators were higher than they should have been because they were not counted correctly.

To address the issues outlined above, the report recommends that USAID/East Africa:

1. Implement a plan to perform and document periodic site visits to verify program implementation (page 5).

2. Implement plans and procedures to (1) schedule data quality assessments so they do not conflict with other major deadlines, and (2) verify data with source documentation at field sites during future data quality assessments (page 6).

Detailed findings appear in the following section, and the scope and methodology appear in Appendix I. Management comments are in Appendix II, and our evaluation of them is on page 7.

AUDIT FINDINGS

Some Incubators and Renovated Hospital Wards Were Not Being Used

To help Burundi improve its maternal and child health services, the program planned to provide selected hospitals in Kayanza and Muyinga Provinces with neonatology training and equipment such as incubators. In addition, the program planned to renovate maternity and pediatric wards at several hospitals.

Despite these objectives, auditors found that one hospital they visited was not using the incubators at all and another could not use them consistently. That hospital also was not using its renovated maternity and pediatric wards.

Medical Equipment Not Being Used. The program purchased 14 incubators, costing a total of about $40,000, and distributed them to seven hospitals in November 2010. However, when the auditors visited in June 2012, two hospitals, Muyinga and Gashoho, were not using the incubators consistently or at all. Muyinga received four, and Gashoho Hospital received two.

A Burundian health official said that although Muyinga Hospital could use the incubators to care for premature babies, it could not do so for those who weighed very little because a critical piece used to administer medicine—the electrical syringe—was available only at referral hospitals in Burundi (those with laboratory facilities, patient accommodations, and large space for future expansion). Muyinga officials said they transfer between 8 and 12 babies to another hospital each month.

Gashoho Hospital officials said they could not use the incubators because the health-care providers had not been trained to use them properly. Furthermore, the Ministry of Public Health (MOH) did not appoint the hospital's specialist in reanimation and incubator use until May 2012—a year and a half after the incubators came.

During meetings with the audit team in June 2012, Pathfinder officials said they did not know that Muyinga and the other nonreferral hospitals were not using the incubators. The officials admitted that Gashoho's staff was not trained because of an oversight and added that they planned to train them by September 2012.

However, in October 2012 a Pathfinder official said the training was still not completed because Gashoho did not have electricity. Although Pathfinder agreed to provide a generator, the hospital could not supply enough fuel to keep the generator functioning. According to Pathfinder, negotiations are under way to connect Gashoho to the national power grid.

Renovated Facilities Not Being Used. In 2011 Pathfinder renovated the buildings housing the maternity and pediatric wards at Muyinga Hospital for approximately $35,000. They were completed and handed over to the government in September 2011.

When the auditors visited Muyinga in June 2012, the renovated wards were not being used. District health officials said this was because they did not have beds and mattresses, which the program promised but never delivered. Pathfinder officials said this happened because there

was a delay in receiving these items from Tanzania and then clearing customs. Subsequent correspondence in October 2012 noted that these items have been delivered and that the renovated pediatric and maternity wards are now in use.

This ward in Muyinga Hospital was not being used because a USAID-funded program did not deliver beds and mattresses on time. (Photo by RIG/Pretoria, June 2012)

These problems were not identified because USAID did not conduct sufficient, timely site visits to monitor program activities, and Pathfinder did not conduct enough supervisory visits to confirm that the hospitals implemented or incorporated the skills their employees were trained to use. USAID officials provided documentation of only three visits to program sites—two in 2009 and one in 2010—while a Pathfinder official said they cannot conduct supervisory visits on their own because MOH officials are responsible for initiating them.

Mission officials said they did not conduct more visits because the agreement officer's representative (AOR) was also the PEPFAR team leader and health team leader for USAID in Burundi. Consequently, this official was heavily involved in drafting documents such as the country operational plan, the mission resource request, and the Global Health Initiative strategy document. Given the deadlines associated with these mandatory documents, the AOR postponed site visits because of time constraints.

A USAID official in Burundi said that after the audit fieldwork ended, Pathfinder bought 20 electrical syringes and distributed them to all the hospitals; as a result, more than 55 premature babies have been cared for at Muyinga Hospital, and the program held several neonatology training sessions there and Kayanza, with more sessions planned.

Had mission and Pathfinder employees visited the sites often, they could have identified and corrected these problems earlier—and therefore used U.S. Government resources more effectively and efficiently. Consistent, thorough project monitoring is an integral part of making

sure that taxpayer funds are well spent in future USAID maternal and child activities in Burundi. Therefore, this audit makes the following recommendation.

Recommendation 1. *We recommend that USAID/East Africa implement a plan to perform and document periodic site visits to verify program implementation.*

Some Reported Results Were Not Accurate

Accurate performance data are a crucial element of USAID's results-based operating philosophy. When they do not meet USAID's quality standards, missions should document any known data limitations and plans for dealing with them so program achievements can be assessed honestly. To promote the collection and reporting of useful, high-quality data, and to help USAID officials know the extent to which data can be relied upon when making decisions, USAID policy and the Government Performance and Results Modernization Act require data quality assessments to be conducted at least every 3 years for data used for external reporting. As part of these assessments, USAID officials were encouraged to compare central records with records maintained at field sites to assess whether reports accurately reflect what occurs in the field.

Despite the importance of accurate data, two of four key program indicators were overstated significantly, as shown in the table below. Moreover, known data limitations for one indicator were not disclosed.

Table 2. FY 2011 Program Indicators Reported by USAID in Burundi (Audited)

Indicator	Target	Reported Results	Audited Result
Number of deliveries with a skilled birth attendant in U.S. Government-assisted programs	30,000	39,912	39,912
Number of children under 5 years of age who received vitamin A from U.S. Government-supported programs	165,000	426,689	235,536[+]
Number of children less than 12 months of age who received DPT3 (diphtheria, pertussis, and tetanus) from U.S. Government-supported programs	47,000	49,176	49,176*
Number of people trained in maternal/newborn health through U.S. Government-supported programs	780	3,370	3,370

[+] Maximum amount based on estimated number of children under 5 residing in Kayanza and Muyinga Provinces.

* Result is overstated by at least 5 percent.

***Number of Children 5 Years of Age Who Received Vitamin A From U.S. Government-supported Programs*.** This indicator was overstated significantly because Burundian officials counted the number of vitamin A supplements given to each child instead of the number of children receiving the supplement. A USAID official said the overstatement occurred during

semiannual immunization campaigns in which vitamin A also was distributed. The number of children receiving the supplements at each event was recorded; so if a child received vitamin A at both events, he or she would be counted twice.

Although USAID knew the indicator was overstated significantly, it did not disclose this data limitation in the FY 2011 annual report because of an oversight and therefore did not give readers an opportunity to assess the program results accurately. This indicator was dropped from the FY 2012 performance plan and report.

Number of Children Less Than 12 Months of Age Who Received DPT3 (Diphtheria, Pertussis, and Tetanus) From U.S. Government-supported Programs. For this indicator, some data errors occurred because health-care workers simply miscounted or mistakenly transcribed the number of vaccinations administered to children in their daily immunization tally sheets, which are the source documents for this indicator. However, Pathfinder did not detect this error because it was not verifying reported results at the health facility level. Instead, it was reconciling data to summary reports provided by the district health offices.

USAID's data quality assessment did not detect the overstatement. In November 2011 USAID's assessment concluded that the quality of the data was "good"; however, the assessment did not include tracing the data to source documents at health facilities. Contrary to Automated Directives System (ADS) 203.3.5.3, the review consisted only of comparing the data to Pathfinder's monthly reports.[1] A USAID official said the assessment was done when the performance plan and report was being compiled, and the staff did not have enough time to verify data at health facilities. The official said future data quality assessments would have to be planned far enough in advance to make sure the required site visits could be done.

Without reliable and accurate performance data, the ability of USAID officials to make informed decisions for effective program management is hindered. Consequently, this audit makes the following recommendation to improve data reported in future maternal and child health activities in Burundi.

> ***Recommendation 2.*** *We recommend that USAID/East Africa implement plans and procedures to (1) schedule data quality assessments so they do not conflict with other major deadlines and (2) verify data with source documentation at field sites during future data quality assessments.*

[1] This refers to the version of ADS 203 in effect when the data quality assessment was conducted.

EVALUATION OF MANAGEMENT COMMENTS

In its comments on the draft report, USAID/East Africa agreed with and made management decisions on both recommendations. Our detailed evaluation of management comments follows.

Recommendation 1. USAID/East Africa agreed with the recommendation to perform and document periodic site visits to verify program implementation. The Burundi field office has established a three-person monitoring team and has completed one site visit with two additional visits planned. The target date for completion of this recommendation is September 30, 2013. As a result, a management decision has been reached.

Recommendation 2. USAID/East Africa agreed with the recommendation to schedule data quality assessments so they do not conflict with other major deadlines and to verify data by comparing it to source documentation during future assessments. Mission officials said the upcoming assessment was rescheduled to avoid conflicts, and the monitoring and evaluation specialist will work in conjunction with the AOR to verify program data by comparing them to source documentation. The target date for completion of this recommendation is October 31, 2013. As a result, a management decision has been reached.

SCOPE AND METHODOLOGY

Scope

RIG/Pretoria conducted this performance audit in accordance with generally accepted government auditing standards. Those standards require that we plan and perform the audit to obtain sufficient, appropriate evidence to provide a reasonable basis for our findings and conclusions in accordance with our audit objective. We believe that the evidence obtained provides that reasonable basis.

The objective of the audit was to determine whether USAID/East Africa's Maternal and Child Health Program in Burundi was achieving its main goal of improving maternal and child health. We conducted our fieldwork from June 4 to June 20, 2012. The team visited 11 health-care facilities in Muyinga and Kayanza Provinces.

The audit focused on the program in Muyinga and Kayanza Provinces and tested selected indicator results for FY 2011. The mission carried out the program through an associate cooperative agreement with Pathfinder under a leader award. The agreement began October 1, 2007, and ended March 31, 2013. The total estimated cost of the award was $11.1 million. As of March 31, 2013, $10.5 million in USAID funds were spent. The 6-month, $750,000 follow-on arrangement with Pathfinder through a field support mechanism was not included in the scope of the audit.

In addition to reviewing the cooperative agreement and program reports, the audit team reviewed documents such as USAID's July 2008 report to Congress on its maternal and child health strategy and the 2008 Burundi population census. The audit examined internal controls over reporting data. The significant controls assessed were the mission's data quality assessment, the February 2012 portfolio review, USAID/East Africa's FY 2011 Federal Managers' Financial Integrity Act of 1982 certification, minutes of the Management Control Review Committee, plans for correcting internal control deficiencies, and relevant portions of the mission's performance management plan.

Methodology

To determine whether USAID/East Africa's program in Burundi was achieving its main goal, the audit team examined selected indicator targets and results for the year ended September 30, 2011. The team also conducted interviews with mission officials in Burundi and Kenya, Pathfinder in Burundi, and officials from the provincial and district offices of MOH.

The audit team used statistical sampling for testing selected indicators and consulted the OIG statistician for advice in sample design and selection. The critical assumption tested in our samples was that the reported results contained errors of no more than 5 percent with 4 percent precision. Results of statistical samples can be projected to the population from which they were derived.

For the indicator *Number of deliveries with a skilled birth attendant in U.S. Government-supported programs*, the audit examined 86 randomly selected deliveries out of the 39,912 reported in FY 2011. In all 86 cases, we determined that the attendant who assisted in

the sampled delivery met the generally accepted qualifications for a skilled birth attendant. We made this determination by examining the diplomas of the people who were recorded in the delivery registers as having helped in the delivery. The diplomas indicated that the individuals' courses of study included obstetrics, gynecology, and other health-related subjects. They also indicated that the named individuals were qualified medical technicians or nurses of varying degrees of skill and whose qualifications included helping deliver babies.

For the indicator *Number of children less than 12 months of age who received DPT3 (diphtheria, pertussis, and tetanus) from U.S. Government-supported programs*, the audit examined 86 random vaccinations out of the 49,176 reported in FY 2011. We sought to determine whether the child received all three required DPT3 doses before his or her first birthday by examining the immunization registers from the health-care facilities that reported the stated numbers for FY 2011. In 71 of the 86 sampled items, we determined that the child received all three doses before his or her first birthday. In 15 of the 86 sampled items, we were unable to locate the entries in the immunization registers. This occurred because the health-care employee either miscalculated or mistranscribed the number of entries that were recorded in the immunization records on their daily or weekly DPT3 summary sheets. Since the number of exceptions exceeded our 5 percent tolerance for error at the 95 percent confidence level and 4 percent variance, the audit concluded that the critical assumption that the reported population contains error of no greater than 5 percent is not valid.

For the indicator *Number of children under 5 years of age who received vitamin A from U.S. Government-supported programs,* we judgmentally selected 15 of the 426,689 reported children to test. Judgmental sampling was used because the audit team already knew the reported result was significantly overstated, and thus statistical sampling would not have been an efficient use of audit resources. Results of this sample cannot be projected to the population.

For the indicator *Number of people trained in maternal/newborn health through U.S. Government-supported programs*, the audit judgmentally selected and tested 447 training records of the 3,370 people reported trained in FY 2011 (13 percent). No exceptions were found. Judgmental sampling was considered the best use of audit resources in this instance. Results of this sample cannot be projected to the population.

MANAGEMENT COMMENTS

USAID | EAST AFRICA
FROM THE AMERICAN PEOPLE

MANAGEMENT COMMENTS

To: Robert Mason, Regional Inspector General/Pretoria

From: Anthony Chan, Acting Mission Director, USAID/East Africa /s/

Date: July 18, 2013

Subject: Audit of USAID/East Africa's Maternal and Child Health Program in Burundi (Report No. 4-695-13-XXX-P)

USAID/East Africa (USAID/EA) appreciates the two recommendations to strengthen the Maternal and Child Health (MCH) Program in Burundi as outlined in Report No.4-695-13-XXX-P dated June 10, 2013. USAID/EA concurs with the recommendations in the subject audit report.

As correctly stated in the audit report, the MCH program has improved maternal and child health; increased the percentage of births attended to by skilled birth professionals and child nutrition in Burundi.

USAID/EA's management comments to the two audit recommendations are as follows:

Recommendation No.1: **We recommend that USAID/East Africa implement a plan to perform and document periodic site visits to verify program implementation.**

USAID/EA agrees with this recommendation.

Burundi Field Office's Action Plan:

- The Burundi Field office formed a Project Management Team (PMT) of three staff under the PEPFAR program who are required to conduct periodic site visit and document trip reports. So far the PMT and Pathfinder, the implementing partner, have performed one site visit in March 2013. The trip report for the March 2013 site visit is attached for your review.

- The last two site visits by the PMT and Pathfinder are scheduled to be performed in July 2013 and September 2013 (project completion date). The PMT will document the findings of both site visits.

The target date for corrective action of this recommendation is September 30, 2013.

Recommendation No. 2: **We recommend that USAID/East Africa implement plans and procedures to a) schedule data quality assessments so that they do not conflict with other major deadlines; and b) to verify data against source documentation at field sites during future data quality assessments.**

USAID/East Africa agrees with this recommendation.

Burundi Field Office's Action Plan:

(a) Scheduled data quality assessments

The Burundi Field Office has assigned the DQA responsibility to the Monitoring and Evaluation Specialist who is dedicated to perform DQAs. The data quality assessment exercise will be rescheduled to ensure that there is no conflict with other major deadlines. The next and last DQA for the MCH program is scheduled and will be completed in October 2013.

(b) Verification of data against source documentation

USAID/East Africa and the Burundi Field Office now require that the DQA process incorporate the step of verifying data against source documentation during field site visits and will apply the principle in the upcoming Performance Plan and Report cycle planned for December 2013.

In addition, the Burundi Field Office has assigned the responsibility of verifying data against source documentation at the field sites to its Monitoring and Evaluation Specialist. The M&E Specialist will work in conjunction with the AOR. During the site visits planned in late July and September, 2013, the Burundi team will verify the MCH data against source documentation and will document the findings in the trip reports.

The target date for corrective action of this recommendation is October 31, 2013.

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