



# OFFICE OF INSPECTOR GENERAL

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## AUDIT OF USAID/MOZAMBIQUE'S TUBERCULOSIS ACTIVITIES

AUDIT REPORT NO. 4-656-12-012-P  
AUGUST 7, 2012

PRETORIA, SOUTH AFRICA



*Office of Inspector General*

August 7, 2012

**MEMORANDUM**

**TO:** USAID/Mozambique Acting Mission Director, Polly Dunford

**FROM:** Regional Inspector General/Pretoria, Christine M. Byrne /s/

**SUBJECT:** Audit of USAID/Mozambique's Tuberculosis Activities  
(Report No. 4-656-12-012-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 in Appendix II.

The report includes four recommendations to strengthen USAID/Mozambique's implementation of its tuberculosis activities. With the information you provided in your response to the draft report, we determined that management decisions have been reached on all four recommendations, and final action has been taken on Recommendations 1 and 2. Please provide the Office of Audit Performance and Compliance Division with the necessary documentation to achieve final action on Recommendations 3 and 4. Recommendations 1 and 2 are closed upon report issuance.

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

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**Abbreviations**

The following abbreviations appear in this report:

ADS	Automated Directives System
AOR	agreement officer’s representative
ART	antiretroviral therapy
CB DOTS	community-based directly observed treatment short course
CHASS/Niassa	Clinical HIV/AIDS Services Strengthening Project in Niassa
CHASS/SMT	Clinical HIV/AIDS Services Strengthening Project in Sofala, Manica, and Tete
KNCV	Royal Netherlands Chemical Society
PEPFAR	President’s Emergency Plan for AIDS Relief
TB	tuberculosis
TB CAP	Tuberculosis Control Assistance Program
TB CARE	Tuberculosis CARE
WHO	World Health Organization

# SUMMARY OF RESULTS

Tuberculosis (TB) is a major worldwide public health problem. The World Health Organization (WHO), in *Global Tuberculosis Control 2011*, classifies Mozambique as one of 22 countries with a high TB burden—estimated at 491 cases per 100,000 people in 2010. The TB epidemic is driven by Mozambique’s generalized HIV epidemic: TB bacteria may reside in the bodies of infected people without causing symptoms, but people with weakened immune systems, such as those with HIV, cannot fight the growth of the bacteria and develop active cases of TB.<sup>1</sup> For that reason, almost two-thirds of TB patients are also HIV-positive. Mozambique’s low level of general development and inadequate health systems already overburdened by HIV exacerbate the situation.

USAID has several initiatives to help the people of Mozambique combat TB. The Tuberculosis CARE Program (TB CARE) is a worldwide initiative implemented through a cooperative agreement with the Royal Netherlands Chemical Society (KNCV) Tuberculosis Foundation, an international leader in fighting TB. In Mozambique, TB CARE is primarily implemented by FHI 360<sup>2</sup> under an agreement with KNCV Tuberculosis Foundation. The program’s main activities in Mozambique include promoting universal access to TB treatment by expanding community-based directly observed treatment short course (CB DOTS) coverage and increasing laboratory proficiency in TB diagnosis.

The Clinical HIV/AIDS Services Strengthening Project in Sofala, Manica, and Tete (CHASS/SMT) and the Clinical HIV/AIDS Services Strengthening Project in Niassa (CHASS/Niassa) are integrated HIV programs that receive funding from the President’s Emergency Plan for AIDS Relief (PEPFAR). They address the challenges posed by the interrelationship between the TB and HIV epidemics. Both programs provide assistance in the prevention of mother-to-child transmission of HIV, antiretroviral therapy (ART), HIV counseling and testing, and health systems strengthening. In addition, they conduct TB/HIV activities—testing TB patients for HIV, screening HIV patients for TB, and referring TB and HIV patients for ART. Because of the programs’ integrated nature, expenditures for activities targeting tuberculosis were not available. Details of these programs appear in Table 1.

**Table 1. USAID Tuberculosis Programs in Mozambique (amounts unaudited)**

<b>Program</b>	<b>Dates</b>	<b>Implementer</b>	<b>Amount (\$ million)</b>	<b>Obligations and Expenditures as of December 31, 2011 (\$ million)</b>
TB CARE	9/29/2010- 9/28/2015	KNCV Tuberculosis Foundation	225.0 Worldwide	5.5
				2.4 Mozambique
CHASS/SMT	11/30/2010- 10/31/2015	Abt Associates Inc.	110.9	21.4 8.4
CHASS/Niassa	8/1/2010- 7/31/2015	FHI 360	32.3	8.4 7.7

<sup>1</sup> Centers for Disease Control and Prevention, HIV and TB Factsheet, June 2011.

<sup>2</sup> Family Health International changed its name to FHI 360 in July 2011.

The Regional Inspector General/Pretoria conducted this audit to determine whether USAID/Mozambique's TB activities were achieving their main goals of expanding CB DOTS, strengthening the country's TB laboratory capacity, and increasing TB/HIV collaboration. The audit found that although a number of first-year targets were not met because of delays in formulating the initial work plan, activities were being implemented as designed and in accordance with established technical guidance. Implementing partner staff, government officials, and community volunteers all said that TB CARE had expanded treatment services, enhanced laboratory capacity, and detected more TB cases by increasing the number of trained volunteers. One TB patient lauded the program and especially the volunteers working with him from the moment he was diagnosed throughout his treatment. The two CHASS programs were providing HIV testing, TB screening, and ART treatment to people with both diseases. In addition, audit tests of data compiled by government health workers were satisfactory.

Despite these accomplishments, the audit found the following areas for improvement:

- Although overall HIV testing of TB patients nearly reached its target, testing was significantly lower in provinces with the highest HIV prevalence, resulting in missed opportunities for HIV prevention and treatment (page 4).
- An inflated target for the percentage of TB patients initiating ART was unrealistic, hindering performance assessment (page 6).
- Delays in the approval of the TB CARE work plan slowed the program's start and prevented the program from achieving first-year targets and planned activities (page 7).
- Activities to improve lab capabilities fell short (page 7). Infrastructure that did not meet standards prevented one lab from doing testing, and a lack of training and maintenance meant microscopes were not used efficiently at some health facilities.
- The TB CARE program did not collect data on women's access to TB services (page 9). Consequently, it cannot address gender-based disparities in diagnosis and treatment.
- Washington officials did not monitor a TB program properly (page 9). The Global Health Bureau officials did not formally assign an activity manager in Mozambique for the program, funded under the USAID/Washington-based Child Survival and Health Grants Program, resulting in inadequate oversight.

The report recommends that USAID/Mozambique:

1. Implement a strategy to raise rates of HIV testing among urban tuberculosis patients in Sofala and Manica Provinces (page 6).
2. Propose and document realistic targets based on World Health Organization data for the percentage of HIV-positive tuberculosis patients initiating antiretroviral therapy during the next interagency planning process in Mozambique (page 7).
3. In collaboration with FHI 360 and the Government of the Republic of Mozambique, implement a plan to optimize use of tuberculosis microscopy (investigation with the microscope), including training technicians, placing them in labs, and outlining procedures to track, repair, and replace defective microscopes (page 8).

4. Work with the Bureau of Global Health to implement procedures for monitoring Child Survival and Health Grants Program activities in Mozambique (page 10).

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 11.

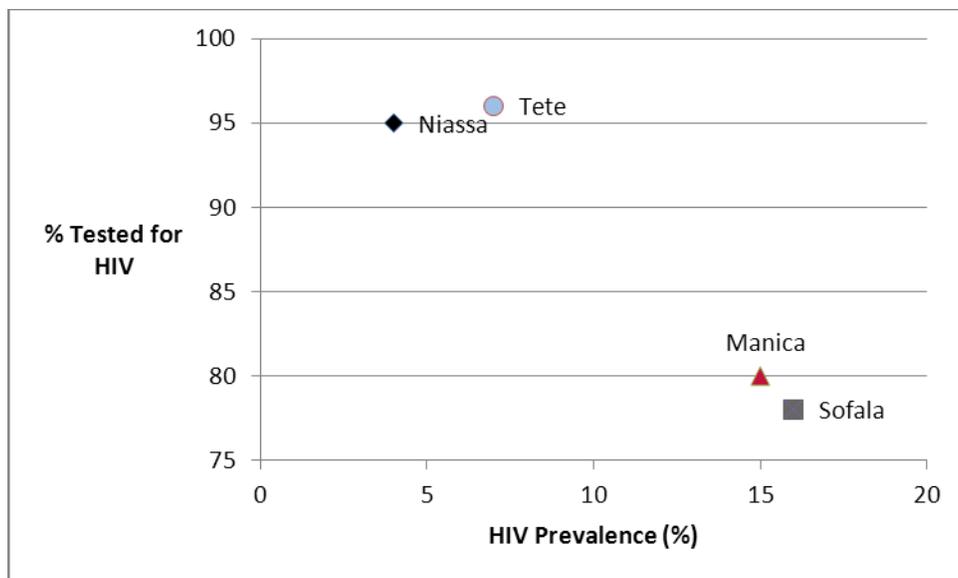
# AUDIT FINDINGS

## Goal Not Met for Testing in Areas With Highest Prevalence

PEPFAR's global strategy for TB/HIV activities supports the WHO Policy on Collaborative TB/HIV Activities, a central part of which is to decrease the burden of HIV infection among TB patients. Consequently, one element in PEPFAR's strategy is to provide HIV testing to patients in TB clinical settings. In Mozambique, USAID's goal was to ensure that 90 percent of registered TB patients were tested for HIV.

USAID narrowly missed this goal in fiscal year 2011, with 83 percent of new TB patients tested for HIV. However, the testing was not uniform in the four provinces USAID operated in, and most significantly, was lowest in the areas with the highest HIV prevalence. The figure below shows these results for Niassa, Tete, Manica, and Sofala Provinces.

**FY 2011 HIV Testing of TB Patients, by Province**



In explaining the lower levels of HIV testing among TB patients in higher HIV prevalence areas, TB clinical staff, implementer personnel, and USAID officials all noted that urban patients were less likely than rural patients to seek counseling and accept an HIV test. Table 2, which shows the breakdown in HIV testing among TB patients in Sofala, Manica, and Tete Provinces, confirms this observation.

**Table 2. HIV Testing Among Urban and Rural TB Patients in Sofala, Manica, and Tete Provinces (audited)**

<b>Locale</b>	<b>Number of TB Patients</b>	<b>Number Tested for HIV</b>	<b>Percent Tested for HIV</b>	<b>Population</b>	<b>Share of Provincial/ Total Population</b>	<b>Share of Provincial/ Total TB Patients</b>
<b>Sofala</b>						
Urban	4,049	2,725	67	546,000	33	58
Rural	2,891	2,700	93	1,130,000	67	42
<b>Total</b>	<b>6,940</b>	<b>5,425</b>	<b>78</b>	<b>1,676,000</b>	<b>100</b>	<b>100</b>
<b>Manica</b>						
Urban	694	457	66	239,000	18	29
Rural	1,704	1,462	86	1,121,000	82	71
<b>Total</b>	<b>2,398</b>	<b>1,919</b>	<b>80</b>	<b>1,360,000</b>	<b>100</b>	<b>100</b>
<b>Tete</b>						
Urban	1,080	1,039	96	156,000	10	42
Rural	1,462	1,400	96	1,396,000	90	58
<b>Total</b>	<b>2,542</b>	<b>2,439</b>	<b>96</b>	<b>1,552,000</b>	<b>100</b>	<b>100</b>
<b>All Three Provinces</b>						
Urban	5,823	4,221	72	941,000	21	49
Rural	6,057	5,562	92	3,647,000	79	51
<b>Total</b>	<b>11,880</b>	<b>9,783</b>	<b>82</b>	<b>4,588,000</b>	<b>100</b>	<b>100</b>

Table 2 shows that Sofala, the most urbanized province with the highest proportion of urban TB cases (as well as HIV prevalence), also had the greatest disparity in HIV testing between urban and rural TB patients. Manica displayed a similar disparity, although it was not as urbanized as Sofala. Both provinces recorded HIV test results for only 2 out of every 3 urban TB patients, well below the desired level, in addition to having higher HIV prevalence than Niassa (shown in the figure on page 4) and Tete. Tete, meanwhile, showed negligible variance in testing rates. According to an implementing partner official, this was expected since the city of Tete was less urbanized than urban centers in Sofala and Manica.

Clinic staff and other officials gave several explanations for lower rates of testing for patients registered at urban clinics. First, urban patients typically had more experience with a friend or relative being HIV-positive or dying of AIDS, and thus were more fearful of learning their status. Others felt that urban patients were more stubborn than their rural counterparts, while one official noted that higher patient volumes in urban health facilities could lead to lower-quality HIV counseling, and thus less HIV testing. Finally, others said the greater availability of testing outlets in urban areas could lead those patients to undergo testing at places other than the TB ward, and thus not have an HIV test result recorded in a clinic registry. In their response to the draft report, mission officials added that reasons for the low testing rates in urban settings "...include the higher demand for services in urban settings and insufficient human resources to meet the need and provide the necessary counseling and testing." This in turn may reduce the likelihood of seeking HIV testing.

Officials from the U.S. State Department's Office of the Global AIDS Coordinator, which oversees PEPFAR, have noted that "TB clinical settings provide an opportunity to identify a

large number of HIV-infected persons who need HIV care and treatment” and that referring people who have both diseases for such assistance is an “essential component” of PEPFAR. Failure to maximize HIV testing of TB patients, therefore, reduces the opportunities for this critical TB/HIV collaboration. For example, if HIV testing in Sofala and Manica had been conducted at the target level of 90 percent, an estimated 668 additional HIV-positive people would have been identified. They could then have been referred to treatment and counseled on measures to prevent infecting others. Consequently, this audit makes the following recommendation.

***Recommendation 1.*** *We recommend that USAID/Mozambique implement a strategy to raise rates of HIV testing among urban tuberculosis patients in Sofala and Manica Provinces.*

## **Inflated Target Clouded Performance Assessment**

In addition to testing TB patients for HIV, initiating ART for eligible TB patients is a key TB/HIV activity. Setting performance targets for it helps establish clear expectations regarding what is to be done and provides a benchmark for assessing performance and taking any necessary corrective action. Automated Directives System (ADS) 203.3.4.5 states that missions should set performance targets that are “ambitious, but can realistically be achieved.” Additional Agency guidance, Performance Monitoring and Evaluation TIPS Number 8, “Baselines and Targets,” amplifies this ADS section by noting that targets should also be “realistic” and “evidence-based.”

Despite these requirements, the annual target for the percentage of HIV-positive TB patients initiating ART was neither achievable nor evidence-based. Specifically, the fiscal year 2011 target was 80 percent, although WHO data indicated that the percentage of such patients on ART in Mozambique ranged from 22 to 30 percent between 2008 and 2010. Even neighboring South Africa, with a vastly superior health system, never exceeded 54 percent during that time. Moreover, the fiscal year 2012 target remained at 80 percent, despite the actual fiscal year 2011 result of 29 percent.

The unrealistic target emanated from the PEPFAR interagency planning process in Mozambique. All PEPFAR-funded U.S. government agencies, including USAID, agree on annual targets as part of preparing the annual Country Operational Plan, which then goes to the Office of the Global AIDS Coordinator for approval. According to USAID/Mozambique, during the interagency planning process, the interagency technical team had numerous debates about how to balance aspirational targets with limited in-country capacity and settled on more ambitious targets.

While good targets can motivate employees to find creative solutions to bolster performance, poor targets can dampen morale and lead to false reporting. Moreover, poor targets render performance assessments meaningless, leading to flawed decisions on funding and programming. To address these potential problems, this audit makes the following recommendation.

**Recommendation 2.** *We recommend that USAID/Mozambique propose and document realistic targets based on World Health Organization data for the percentage of HIV-positive tuberculosis patients initiating antiretroviral therapy during the next interagency planning process in Mozambique.*

## **Work Plan Delays Slowed Start of One Program**

The TB CARE cooperative agreement was effective September 29, 2010. According to the agreement, the recipient had 60 days to submit an annual work plan and budget to USAID for approval. Despite this requirement, FHI 360 did not submit the work plan for TB CARE activities in Mozambique until May 21, 2011; USAID approved it on June 27, 2011.

The work plan was late for two reasons. First, the predecessor program, Tuberculosis Control Assistance Program (TB CAP), was extended through March 2011. This delayed TB CARE work plan development because the same staff members were largely involved in TB CAP and TB CARE and thus could not devote full efforts to planning Year 1 activities under TB CARE. Second, the Mozambican Government adopted a highly collaborative approach with U.S. Government agencies and partners that included development of an overall strategic plan. This approach required more consultations to achieve consensus, and thus more time.

Although stakeholder consensus is critical for the long-term success of anti-TB efforts in Mozambique, the delay in formulating the initial work plan led to a slow start for TB CARE. Key targets, such as expanding CB DOTS from 25 to 36 districts and implementing 20 percent of planned activities to support a Mozambique strategy to address drug-resistant TB, were not met by September 30, 2011. As of December 31, 2011, TB CARE estimated that only 80 percent of activities under the first-year work plan had been implemented.

To compensate for this slow start, USAID anticipates that Year 2 activities will be implemented in 9 months. USAID expects TB CARE to be back on schedule with the Year 3 work plan, starting around October 1, 2012. Consequently, the audit makes no recommendation on this matter.

## **Activities to Improve Lab Capabilities Fell Short**

Laboratories and associated equipment, like microscopes, are critical components of an effective national TB response. Consequently, TB CARE includes activities to improve laboratory capabilities in Mozambique. Despite this emphasis, the audit found some problems with laboratory infrastructure, personnel, and equipment.

**Beira Lab Did Not Meet Quality Standards.** According to the TB CARE work plan, one of the program's goals is to expand the capacity for TB testing<sup>3</sup> to all three regional laboratories in

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<sup>3</sup> TB testing in Mozambique includes sputum smear microscopy and culturing. The former test involves placing a thin layer—a smear—of sputum (the saliva and other matter coughed up by a patient thought to have TB) on a glass slide, applying stain to enhance contrast, and examining the slide under a microscope for traces of TB bacteria. The latter test involves growing the bacteria. According to [www.TBFacts.org](http://www.TBFacts.org), culturing requires special equipment and lab facilities. Lab technicians may also conduct drug susceptibility testing to determine which drugs a particular strain of bacteria is susceptible to and whether the patient has drug-resistant TB.

Mozambique. Because conducting testing requires labs to meet national and international quality standards, such as adequate sterilization, TB CARE provides technical assistance in compliance with the standards, as well as assistance, where possible, with renovating infrastructure.

Nevertheless, one of the three regional laboratories—the Beira Regional Reference Laboratory—did not meet all relevant quality standards. A room used for the preparation of slides was not sterile because its windows were flexible sliding panes instead of sealed panes.

FHI 360 was not aware of this deficiency until the audit; neither the Ministry of Health nor the laboratory notified the organization. FHI 360 officials said that although TB CARE was required to provide some equipment, training, and other technical assistance, the Ministry of Health was responsible for health facility infrastructure. Nonetheless, FHI 360 officials acknowledged that the program budget for laboratory renovations and equipment purchases was insufficient. USAID expected other donors to fund equipment maintenance costs at the Beira Regional Reference Laboratory and at the reference laboratory in Maputo; however, this funding did not materialize, and maintenance costs had to come out of the budget for renovations and purchases.

Without a sterilized room at the Beira Regional Reference Laboratory, the quality of slides and reagents used in examining samples under microscopes is questionable. In addition, delays in developing the ability to culture TB and use new technologies for diagnosing standard and multidrug-resistant TB hinder Mozambique's national response to the disease. According to an FHI 360 official, in response to this audit FHI 360 purchased and installed sealed pane windows in the Beira Regional Reference Laboratory for approximately \$150, eliminating the problem.

**Personnel Lacked Training in Using Microscopes.** Microscopes and the ability to use them are essential for TB detection and eventual verification that a patient has been cured. However, the use of microscopes was not optimal at some of the health facilities visited. For example, the Tunga health facility in Buzi District had a microscope but no trained lab technician to use it. The presence of a technician there would have saved the time and expense required to transport sputum specimens to the central laboratory in the town of Buzi.

**Government Did Not Maintain Equipment.** At other locations visited, including the Beira Regional Reference Laboratory, auditors noted unrepaired, defective microscopes.

According to the government, FHI 360, and mission officials interviewed, labs did not make better use of microscopes for two reasons. First, there was poor planning and collaboration between FHI 360 and the government regarding the training and placement of laboratory technicians and the availability and condition of essential laboratory equipment. Second, government funding and organizational structure hindered equipment maintenance. For example, an official at the National Reference Laboratory said that while the Ministry of Health is responsible for maintenance, another department manages all government equipment.

Besides creating program inefficiency, broken or unused microscopes can reduce TB detection and the number of infected persons receiving treatment. Consequently, this audit makes the following recommendation.

***Recommendation 3.*** *We recommend that USAID/Mozambique, in collaboration with FHI 360 and the Government of the Republic of Mozambique, implement a plan to optimize use of tuberculosis microscopy, including training technicians in tuberculosis*

*microscopy, placing technicians in labs, and outlining procedures to track, repair, and replace defective microscopes.*

## **Program Did Not Compile Data on Women's Access to Diagnosis and Treatment**

According to USAID's Gender Equality and Female Empowerment Policy, promoting gender equality is one of the Agency's seven basic principles, and USAID programs should deliberately and explicitly seek to eliminate gaps between the status of males and females. The TB CARE cooperative agreement incorporates this principle by stating that access to quality TB treatment "needs to be expanded to ensure women are appropriately reached and gender considerations are properly integrated into all TB programs." As part of this effort, obtaining data on gender-based barriers to accessing treatment is critical to monitoring and evaluating program performance effectively.

Despite this emphasis in both the cooperative agreement and Agency policy, the TB CARE program in Mozambique did not adequately integrate gender considerations, according to the mission's gender specialist. The specialist attributed this deficiency to the lack of gender-disaggregated data (e.g., number of women tested for TB at a health facility in the Sofala District), which is crucial for formulating an effective gender strategy for the mission's TB program. Although health facilities collect disaggregated data, the Ministry of Health does not compile or report it because the Ministry's aim has been to combat the disease generally and not focus on women specifically. As a result, women may not be receiving adequate TB diagnostic and treatment services.

As part of TB CARE, FHI 360 and its partners have been working with Mozambique's National Tuberculosis Control Program to revise TB data collection tools and techniques. According to an FHI 360 official, these revised tools will record TB data disaggregated by gender. The program will then help government officials analyze gender disparities in accessing early TB diagnosis and treatment and address any disparities identified. Because the program is taking steps to address this issue, the audit is not making any recommendations in this area.

## **Washington Officials Did Not Monitor Program Properly**

According to the Government Accountability Office's *Standards for Internal Control in the Federal Government*, internal control helps provide reasonable assurance that operations are conducted effectively, efficiently, and in compliance with legal and regulatory requirements. The standards then state that monitoring—a key component of internal control—should be "performed continually," be "ingrained in the agency's operations," and include "regular management and supervisory activities." Office of Management and Budget Circular A-123, a mandatory reference for USAID's ADS Chapter 596, "Management's Responsibility for Internal Control," also underscores the importance of monitoring.

Despite these multiple criteria, USAID officials did not adequately monitor one TB program in Mozambique. The program, which began in September 2009, is a 5-year, \$1.5 million cooperative agreement with World Relief to provide CB DOTS services to six districts in northern Gaza Province. The award was made under the Child Survival and Health Grants Program, and

the award's agreement officer and agreement officer's representative (AOR) are located in Washington, D.C.

According to the AOR, monitoring consisted of approving detailed implementation plans, examining annual reports, and reviewing a midterm and final evaluation conducted by external evaluators. However, these activities at the beginning, middle, and end of a 5-year program are not sufficient to meet the requirements for regular monitoring under the *Standards for Internal Control in the Federal Government* and Circular A-123. Most significantly, although the AOR visited Mozambique before the start of the program, neither she nor any other USAID official had physically monitored the program's activities.

Problems with monitoring occurred because USAID officials in Washington did not designate an activity manager in Mozambique. In response to audit inquiries, the AOR said that mission contacts "serve as the activity managers . . . for any CSHGP [Child Survival and Health Grants Program] supported in-country projects." Despite this assertion, the USAID/Mozambique contact identified by the AOR said he was never formally designated as the activity manager, and he construed his duties as primarily providing input during the preaward selection process. Furthermore, the official said that he expected to receive more information on the final award and its oversight and management after the AOR's visit to Mozambique, but "this never happened." Finally, he said the AOR had never asked him to monitor any of World Relief's activities or provide trip reports or other feedback.

Without regular, in-person monitoring of program activities by USAID officials, the Agency, Congress, and taxpayers lack reasonable assurance that programs are implemented effectively, efficiently, and in compliance with applicable laws and regulations. For this particular program, a site visit by the audit team revealed no deleterious effects because of a lack of monitoring; however, this may not always be the case, either in Mozambique or in other countries. To comply with U.S. Government policy on internal control, this audit makes the following recommendation.

***Recommendation 4.*** *We recommend that USAID/Mozambique work with the Bureau of Global Health to implement procedures for monitoring Child Survival and Health Grants Program activities in Mozambique.*

# EVALUATION OF MANAGEMENT COMMENTS

In its comments on the draft report, USAID/Mozambique agreed with all four recommendations. Management decisions have been reached on all of them, and final action has been taken on two of them. Our detailed evaluation of management comments follows.

**Recommendation 1.** As documented in its response to the draft report (pages 17 to 19), USAID/Mozambique has already started to implement a strategy to raise rates of HIV testing among urban tuberculosis patients in Sofala and Manica Provinces. As a result, a management decision has been reached, and final action has been taken on Recommendation 1.

**Recommendation 2.** USAID/Mozambique not only agreed, but the interagency team has already gone back to the Office of the Global AIDS Coordinator and revised fiscal year 2012 targets from 80 percent to 70 percent. As a result, a management decision has been reached, and final action has been taken on Recommendation 2.

**Recommendation 3.** USAID/Mozambique agreed. Its plan, which is described in detail on pages 19 to 20, will be almost completely accomplished by December 2012; the one exception is personalized technical assistance training at laboratories, which it plans to start in January 2013. Therefore, a management decision has been made on this recommendation.

**Recommendation 4.** The mission has already started working with the Bureau of Global Health to design procedures for monitoring Child Survival and Health Grants Program activities in Mozambique, which it expects to implement by August 31, 2012. Therefore, a management decision has been made on Recommendation 4.

# SCOPE AND METHODOLOGY

## Scope

The Regional Inspector General/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/Mozambique's TB activities were achieving their main goals of expanding CB DOTS, strengthening the country's TB laboratory capacity, and increasing TB/HIV collaboration. Audit fieldwork was conducted from February 6 to February 24, 2012.

In planning and performing the audit, we assessed USAID/Mozambique's internal controls. Specifically, we reviewed and inquired about the mission's reporting for the Federal Managers' Financial Integrity Act of 1982,<sup>4</sup> which provided detail on the mission's administrative management, financial management, programming, and general control environments. We also obtained an understanding and evaluated supporting documentation of the mission's organizational structure, assistance processes, monitoring and evaluation procedures, and reporting processes. Furthermore, we:

- Determined whether mission management established an environment conducive to good internal control.
- Confirmed that AOR designation letters existed and were in accordance with ADS 303.3.14.
- Reviewed the process that TB CARE subawardees in Mozambique follow in submitting financial reporting to FHI 360 and associated controls implemented by FHI 360.
- Gained an understanding of implementing partners' monitoring of subrecipients and implementation sites.
- Checked implementing partners' compliance with the Excluded Parties List System.

We focused our audit on two of USAID/Mozambique's primary TB activities—CB DOTS and TB/HIV coinfection initiatives. CB DOTS is implemented through TB CARE, for which funding in fiscal year 2011 was \$4.3 million. TB/HIV coinfection activities received PEPFAR funding of \$911,673 for CHASS/Niassa and CHASS/SMT combined as of fiscal year 2011; however, because of the integrated nature of CHASS/Niassa and CHASS/SMT, expenditures for activities targeting tuberculosis were not available. The amounts obligated and expended under these programs as of December 31, 2011, are provided in Table 1 on page 1. We did not include in the scope of the audit (except for one site visit) the 5-year, \$1.5 million cooperative agreement with World Relief under the Child Survival and Health Grants Program since we were not

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<sup>4</sup> Public Law 97-255, codified in 31 U.S.C. 3512.

informed of the existence of this program until commencement of site visits. As of December 31, 2011, USAID had obligated approximately \$900,000 for this agreement.

We conducted fieldwork in Maputo, where we interviewed key personnel from USAID/Mozambique; TB CARE, CHASS/Niassa, and CHASS/SMT; and the Mozambique Ministry of Health (including those from the National Tuberculosis Control Program, the National Reference Laboratory, and the Zimpeto Central Medical Store). We visited Sofala and Gaza Provinces, where we interviewed provincial and district health officials with responsibilities for the TB program. We also interviewed FHI 360 personnel in their Beira regional office, subgrantees of FHI 360 implementing CB DOTS activities in six districts, CB DOTS volunteers, and a TB patient.

Mozambique has ten provinces, each with multiple districts. Although TB CARE has a presence in seven provinces and 36 districts, with plans to expand to 24 more by the end of the program, CB DOTS activities had barely begun or had not yet begun in many locations. Consequently, the audit team selected site visit locations with the most CB DOTS activities, based on discussions with responsible mission officials and our review of the reported data. We then judgmentally select two provinces and three districts in each for our field visits of provincial and district health offices and health centers. We made a substitution for one district after we discovered another program during fieldwork; the substitution allowed us to cover at least one of the six districts of northern Gaza Province in which World Relief is implementing CB DOTS under a separate cooperative agreement with USAID/Washington. These visits gave us coverage of 26 percent of the people tested and 23 percent of the patients who underwent treatment for TB in Mozambique as of the first quarter of 2011.

## Methodology

To answer the audit objective, we first reviewed applicable laws, best practices, and guidelines. Specifically, we reviewed the Tom Lantos and Henry J. Hyde United States Global Leadership Against HIV/AIDS, Tuberculosis, and Malaria Reauthorization Act of 2008 (Public Law 110-293); the Gender Equality and Female Empowerment Policy; as well as USAID's ADS Chapters (201, "Planning"; 202, "Achieving"; 203, "Assessing and Learning"; 204, "Environmental Procedures"; 302, "USAID Direct Contracting"; 303, "Grants and Cooperative Agreements to Non-Governmental Organizations"; and 320, "Branding and Marking." Through reviews of documents obtained from, and preliminary discussions with, the mission, we determined that TB CARE was the primary TB program at USAID/Mozambique. We determined that TB CARE's focus was on CB DOTS, along with capacity building at the related TB laboratories and health systems strengthening. From the mission's performance report and the implementing partner's quarterly reports, as well as from discussions with mission officials, we determined that the key indicators to focus on as measurements of the intermediate results of the program's main objectives were (1) *Number of people trained in CB DOTS with U.S. Government funding*, (2) *TB case detection rate*, and (3) *TB treatment success rate*. We also determined that TB/HIV coinfection control and therapy were significant aspects of the TB program. In testing these indicators, we traced the data reported in the mission's performance plan and report to its sources—the government data reports on TB, FHI quarterly reports to USAID—and compared our judgmentally selected samples with records kept by FHI subgrantees' and the government's national, provincial, district, and health facilities.

Lastly, we determined that building laboratories' capacity and strengthening health systems were also integral parts of the program's objectives. In this regard, the official we interviewed at

the National Reference Laboratory informed us, and our own observation confirmed, that a new TB section had been improved structurally with funding from TB CAP. There, and at the Beira Regional Laboratory, we saw key laboratory equipment furnished by TB CARE. We did not visit Nampula but were informed by FHI that the rehabilitation of the regional laboratory there, also funded by TB CARE, was near completion. At most of the health facilities we visited, we found equipment provided by TB CARE.

Because we did not select a statistical sample of sites or data for testing, we cannot project our results to all activities. Nonetheless, we believe evidence gathered during fieldwork provided us sufficient means to answer our audit objective.

# MANAGEMENT COMMENTS



25 July 2012

## MEMORANDUM

**TO:** Christine M. Byrne, Regional Inspector General/Pretoria

**FROM:** Polly Dunford, Acting Mission Director /s/

**SUBJECT:** Audit of USAID/Mozambique's Tuberculosis Activities (Report No. 4-656-12-XXX-P)

This memorandum transmits USAID/Mozambique's responses and comments to the Draft Report of the audit of USAID/Mozambique's Tuberculosis Activities sent to the Mission on June 25, 2012. USAID/Mozambique appreciates receipt of the draft report and the opportunity to offer clarifications and our response. We request that our response be included in its entirety in the final report of the audit.

The overarching goal of USAID/Mozambique's support to the tuberculosis program in Mozambique is to increase tuberculosis detection rates, numbers on treatment, and tuberculosis treatment success rates to reduce tuberculosis morbidity and mortality. The USAID/Mozambique supports the Ministry of Health's (MOH) National Tuberculosis Strategy to increase tuberculosis case detection and treatment success rates. In addition, USAID/Mozambique is implementing an ambitious portfolio of TB/HIV activities with PEPFAR funds, in conjunction with the Centers for Disease Control and Prevention (CDC). The Mission's work in TB and TB/HIV provides opportunities for USAID/Mozambique to improve our overall approach to strengthening tuberculosis prevention and treatment in the country and to establish better-integrated programs. We appreciate the time and effort that the Regional Inspector General (RIG) devoted to conduct the audit, as well as the professionalism of the RIG staff. We value audits and consider them as an opportunity to improve USAID health programming. The Draft Report for the audit of USAID/Mozambique's Tuberculosis Activities raises many valid and important points. USAID/Mozambique would like to clarify and provide context for several issues outlined in the resultant findings and recommendations.

### I. GENERAL COMMENTS AND CLARIFICATIONS:

#### Target Setting under PEPFAR and TB CARE Process:

Targets for HIV-TB are set annually during the planning process for the PEPFAR Country Operational Plan (COP). USAID and CDC, the two agencies with clinical activities, collaborate

U.S. Agency for International Development  
JAT Complex  
Rua 1231, n.º 41  
P.O. Box 783  
Maputo, Mozambique

Tel: (258) 21 35 20 00  
Fax (258) 21 35 21 00  
[www.usaid.gov/mz](http://www.usaid.gov/mz)

U.S.A. Postal Address  
2330 Maputo Place  
U.S. Department of State  
Washington, D.C. 20521-2330

to set clinical targets in compliance with the Office of the Global AIDS Coordinator. Methodologies and formulas for setting targets for each indicator are agreed upon by the interagency clinical and strategic information teams, and, in general, are applied uniformly across all clinical implementing partners.

As part of the COP process, targets are set for the following HIV-TB indicators by USAID/Mozambique-funded clinical project, Clinical HIV/AIDS Services Strengthening in Niassa, implemented by FHI 360 (CHASS-N) and Sofala, Manica, and Tete (CHASS SMT), implemented by Abt Associates are:

- *the number of HIV-positive patients who were screened for TB in an HIV care and treatment setting*
- *the number of HIV-positive patients in HIV care or treatment (pre-ART or ART) who started TB treatment*
- *the number of TB patients who had an HIV test*
- *the number of HIV-positive TB patients (co-infected) who are known to have started ART.*

The targets for TB CARE, the Mission's tuberculosis specific implementing partner project, are based on the National Tuberculosis Program's five-year strategic plan (2008 -2012) that aims to reach the global WHO STOP TB goal of achieving 70% TB case detection and 85% treatment success rate and the Millennium Development Goals of decreasing the morbidity and mortality due to TB by 50%. During the COP 2012 target setting exercise, the interagency technical team was encouraged to put forward ambitious targets in order to reach global PEPFAR goals, with a focus on "treatment as prevention". There were numerous debates about how best to balance the priority to "push the envelope" and set aspirational targets with the limitations of in-country capacity. In the end, the interagency team reached consensus to set more ambitious targets.

#### **Data and reporting:**

Partners report TB-HIV data to USAID semi-annually (April and October), as part of the PEPFAR reporting schedule. This data is analyzed by the technical staff. TB CARE submits quarterly reports to USAID (January, April, July, and October).

In November 2011, members of USAID's Strategic Information team conducted a data verification and documentation review exercise in Sofala of *the number of HIV-positive patients in HIV care or treatment (pre-ART or ART) who started TB treatment*. Data reported by the partner (CHASS SMT) for this indicator as part of the Annual Program Results (APR) was found to be largely consistent with the data in the Monthly Summaries from the health facilities.

In May 2013, a joint CDC-USAID data verification exercise is planned to review data reported as part of the FY2013 Semi-Annual Program Results (SAPR). This exercise will review, among other indicators, *the number of HIV-positive patients who were screened for TB in an HIV care and treatment setting and the number of HIV-positive patients in HIV care or treatment (pre-ART or ART) who started TB treatment*. A selection of USAID partner sites in Manica and Sofala are planned for inclusion in the study.

#### **Implementation of TB and TB/HIV interventions:**

The Mission supports the National Tuberculosis Program (NTP) through TB Care I, implemented by Family Health International 360. TB CARE's scope includes providing technical assistance and support at the central level and activities aim to strengthen institutions and programs related to TB control, by improving accessibility and quality of TB prevention,

diagnosis and treatment, including multi-drug resistant TB (MDR TB); improving community involvement in TB control, and enhancing effective linkages across the continuum of care from home to hospital. These interventions all contribute to the national, global and Millennium Development Goals (MDGs) targets for TB.

In addition, TB CARE provides technical assistance to the NTP Task Force and Technical Advisory Group. The Task Force and the Technical Advisory Group were created to improve coordination, avoid duplication and increase synergies in TB programming. TB CARE also participates as a technical advisor in the technical sub-group on infrastructure issues related to TB headed by the Infrastructure Department at the MOH.

Simultaneously under PEPFAR, the Mission provides technical assistance at the health facility level in the provinces of Sofala, Manica, Tete and Niassa to strengthening of TB/HIV interventions through Abt Associates and Family Health International 360 (FHI 360). This includes supporting core TB/HIV activities in provider initiated counseling and testing (PICT) for TB patients at TB service, Cotrimoxazol Preventive therapy (CPT) to TB/HIV co-infected patients and referrals to HIV care & treatment as well as strengthening the 3 I's: Intensive Case finding (ICF) Isoniazid Preventive Therapy (IPT) and Tuberculosis Infection control (TB- IC).

#### **Work plan delays:**

The Mission agrees that approving work plans in a timely fashion is critical to implementing effective activities. USAID/Mozambique will ensure that in the development of the next work plan that all parties involved abide to the timeline approved. This will be accomplished by streamlining the process and including all parties from the beginning, simultaneously being reviewed by the USAID headquarters, the Mission and the National Tuberculosis Program to avoid delays.

#### **Gender:**

New data collection tools were revised in 2010 to include information disaggregated by sex, age and patient's referral point. It was piloted in the provinces of Maputo and Tete in September 2011. The NTP is scheduling to begin training on the new tools in September or early October 2012.

In addition, from July 23-24, 2012, the NTP convened a meeting of stakeholders - USAID, CDC, WHO and TBCARE I - to discuss surveillance issues, including the importance of strengthening data analysis as it relates to gender. Moreover, from September 3-6, 2012, the NTP will launch the national TB five-year strategic plan (2013-2017) where provincial TB supervisors will be oriented on the new data collection process for analyzing data by gender.

## **II. USAID/MOZAMBIQUE RESPONSE TO AUDIT RECOMMENDATIONS**

**Recommendation No. 1:** *We recommend that USAID/Mozambique develop and implement a strategy addressing lower rates of HIV testing among urban Tuberculosis patients in order to improve HIV testing rates in Sofala and Manica provinces.*

The Mission concurs with the findings on the low HIV testing in those provinces and appreciates the stratified analysis conducted by the RIG by rural and urban settings. The target setting of 90% of TB patients tested for HIV was due to the fact WHO recommended that 100% of TB patients be tested for HIV and vice-versa in order to provide quality care of services for the co-infected patients. In 2011 the country achieved coverage of 80% of TB patients tested for HIV.

After this audit, the Mission held a technical meeting with TBCARE I, CHASS-SMT and CHASS Niassa to discuss the concerns about missed opportunities for HIV testing among TB patients. Reasons behind the low rates in urban settings include the higher demand for services in urban settings and insufficient human resources to meet the need and provide the necessary counseling and testing. This in turn may lead to low acceptance of HIV testing. In addition, there are irregularities in the availability and management of HIV test kits in TB settings.

Taking in consideration these findings, CHASS-SMT, with technical support from TB CARE and in coordination with Ministry of Health authorities in Sofala and Manica, will conduct a rapid situational and indicator analysis in the end of August 2012 to discover which urban health facilities have the potential to increase HIV testing among TB patients. Upon identification, CHASS-SMT will prioritize these facilities, identify the constraints, and develop tailored implementation plans for each facility to improve HIV testing. It is anticipated that some key activities to resolve the problem could include improved staff training, establishment of one stop shop model, minor renovations, decentralization of counseling and testing, improved advocacy, communication and social mobilization activities in these settings. All implementation plans will include a monitoring and evaluation plan.

In addition, USAID/Mozambique will specifically review the data from the approximately 25 primary urban health facilities in Sofala, Manica, and Tete provinces after each reporting period after the next Annual Portfolio Review (October/November 2012). This will enable close monitoring and serve as an evidence base from which plans to increase HIV testing can be adjusted as necessary.

With respect to the availability of HIV test kits, CHASS-SMT is launching in Sofala province a new implementation strategy on quality assessment/quality improvement (QA/QI) to improve the control of commodity stocks through the use of a mobile technology. This activity started this month and will be monitored on a monthly basis. TB CARE in coordination with Management Science for Health, will establish an early warning system for HIV reagents and test kits adapted from a system recently developed for TB drugs to reduce and prevent frequent occurrences of stock out and/or expired HIV test kits for TB patients. Moreover, the TB/HIV Task Force will follow and discuss with logistic staff on existing stocks of HIV reagents, and every supervision team will monitor the process during field visits on a quarterly basis starting in August 2012.

Additional activities to capitalize on the above mentioned interventions include:

- Recruit two TB CARE technical provincial officers to be based in Tete and Sofala (Manica will receive support from the Sofala officer) to provide supervision, on the job training of local staff, support to improve patient flow within the health facilities to ensure that testing opportunities and ARV treatment of co-infected patients are not lost. The process of recruitment will start in October 2012, after the approval of Annual Plan of Action, year 3 (APA3). The technical provincial officers will also address the issues of patients being referred to VCT clinics instead of being tested and register in the TB sector.
- Conduct a three-day refresher training for CHASS-SMT, CHASS-N, and TB CARE provincial technical officers (including technical coordinators from CB DOTS implementing agencies) on MDR TB and TB/HIV collaborative activities. This training is planned to take place in September of this year and will also include capacity building for the use of M&E tools and analysis of data.

- Joint monthly supervision visits will be conducted start in October 2012 at the provincial level, including with participation of USAID/ Mozambique TB technical advisor, TB CARE staff, CHASS-SMT, CHASS-N officers, and NTP representatives at central level.
- Production, distribution and dissemination pamphlets on TB/HIV issues in all 11 provinces is planned to be done in august of current year.

**Recommendation No. 2:** *We recommend that USAID/Mozambique propose realistic targets, based on World Health Organization data, for the percentage of HIV-positive tuberculosis patients initiating anti-retroviral therapy during the next interagency planning process in Mozambique.*

USAID/Mozambique concurs with this finding. Mission acknowledges that the target for TB patients initiating ART was ambitious. The basis for the target of 80% of co-infected TB/HIV patients being treated with ART was Mozambique's adoption of the WHO guidelines for universal ART for HIV/TB patients, as well as the recent prioritization by the Office of the Global AIDS Coordinator (OGAC) to help achieve an AIDS Free Generation. However, USAID agrees that drug logistic issues, past performance, and WHO data should have been taken into consideration when developing the FY 2012 targets. Therefore, the interagency team went back to OGAC and revised its targets from 80% to 70%. New approaches are expected to improve the provision and uptake of TB and HIV services such as mobile units and the scaling up of the one stop model. The MOH's new guidelines for task shifting ARV prescribing to nurses will also inform future target setting. These new approached will be taken into account as part of the evidence base used for the FY 2013 interagency COP target setting exercise.

The Mission has started the discussion with the MOH and other partners to follow-up the evolution of new co-infected TB/HIV enrolled on ARV and establish a more realistic and achievable targets and during the FY 2013 COP. Based on the experience and the results achieved in FY 2012, it has been agreed that the next process of target setting will incorporate a more grounded exercise and include the numerous variables that better depict what can be achieved during the given timeframe, including World Health Organization data, and information from neighboring countries in the region that have similar conditions to Mozambique. We believe that no further action is currently required. We therefore request that this recommendation be closed.

**Recommendation No. 3:** *We recommend that USAID/Mozambique, in collaboration with Family Health International and the Government of the Republic of Mozambique, develop and implement a plan to help optimize use of Tuberculosis microscopy, including training and placement of technicians in Tuberculosis microscopy and procedures to track, repair, and replace defective microscopes.*

The Mission acknowledges and agrees with the findings regarding the need to optimize the use of microscopy for tuberculosis. In September of 2012, TBCARE I will translate a manual called, "Guidelines and specifications for managing TB laboratory equipment and supplies" developed by TBCAP-USAID. This manual will be used to train laboratory technical staff as well as NTP staff to develop a system for efficient and timely procurement of quality laboratory equipment and supplies, and the ongoing management of all TB-related laboratory commodities. The expected result of this training will lead to improved knowledge on the components of the commodity management cycle, which includes the phases of *selection, procurement* (including quantification, forecasting, and the process of projecting future needs over a longer period of time), *distribution* (the process of transporting, delivering and receiving laboratory supplies;

appropriate storage; inventory control; and information systems for receipt and disbursement), *use* (the safe and effective use of TB laboratory diagnostic services and commodities includes performing tests effectively and efficiently, and technical aspects of testing) and *management support and preparedness* (essential to all the functions listed above and proper quantification is vital to ensuring that adequate stock levels of TB laboratory commodities are always available).

Moreover, FHI 360 will complete by end of FY 2012 a baseline assessment on the microscopy network in the seven target provinces in order to strengthen the capacity and increase the accessibility of quality assured TB smear microscopy network by the end of this year.

In order to improve the efficient use of microscopes the TB CARE team has identified the following key activities to be included in APA3:

- In September of this year, assess the microscopy that needs to be replaced or repaired as well as purchasing spare parts and other laboratory consumables will be performed. New microscopes will be procured and/or refurbished where needed;
- Train technicians at the provincial level in maintenance of microscopes, TB microscopy, including quality assurance and laboratory management by December 2012;
- Provide personalized technical assistance to the laboratories based on their needs will be started in January of the next year.

Other activities that will expand the coverage of quality assured microscopy network include:

- Introduction of External Quality Assurance (blind rechecking) by October 2012;
- Procurement of Light-emitting diode (LED) microscopy by September 2012;
- Conduct refresher courses and follow-up of nurses trained in AFB slide fixation by December 2012.

Specifically concerning Buzi district, a TB CARE officer is currently supervising the district with the TB Provincial Supervisor. The concerns raised during the audit visit of Tunga health post in Buzi will be addressed by the Provincial Health Department (DPS), which plans to allocate a lab technician to be based at that lab facility. In the meantime the implementing partner, sub-grantee “Ajuda de Desenvolvimento de Povo para o Povo” (ADPP) will provide support to that facility to train a nurse on fixing specimens to make permanent slides (slide’s fixation) and facilitate its transportation by September 2012.

**Recommendation No. 4:** *We recommend that USAID/Mozambique work with the Bureau of Global Health to develop and implement procedures for activity managers to follow regarding their monitoring of Child Survival and Health Grant Program projects in Mozambique.*

USAID/Mozambique concurs with this finding. The Mission is in communication with the Global Health Bureau’s Child Survival and Health Grant Program AOR about establishing standard operation procedures, which will include that the Mission Activity Manager participate in workplan reviews, regular meetings, field visits and provide technical comments to the quarter and final project’s implementation reports. No further action is currently required. We therefore request that this recommendation be closed.

**U.S. Agency for International Development**  
**Office of Inspector General**  
1300 Pennsylvania Avenue, NW  
Washington, DC 20523  
Tel: 202-712-1150  
Fax: 202-216-3047  
[www.usaid.gov/oig](http://www.usaid.gov/oig)