



OFFICE OF INSPECTOR GENERAL

AUDIT OF USAID/SOUTHERN AFRICA'S TUBERCULOSIS ACTIVITIES

AUDIT REPORT NO. 4-674-13-001-P
NOVEMBER 5, 2012

PRETORIA, SOUTH AFRICA



Office of Inspector General

November 5, 2012

MEMORANDUM

TO: USAID/Southern Africa Mission Director, Jeff Borns

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

SUBJECT: Audit of USAID/Southern Africa's Tuberculosis Activities (Report No. 4-674-13-001-P)

This memorandum transmits our final report on the subject audit. In finalizing the report, we considered your comments and included your response in Appendix II.

The final report contains four recommendations to help strengthen USAID/Southern Africa's implementation of its tuberculosis activities. We agreed with the mission's management decisions on all four recommendations. Please provide the Office of Audit Performance and Compliance Division with the necessary documentation to achieve final action on Recommendations 1 through 4.

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:

CSH	Child Survival and Global Health
DOTS	directly observed treatment, short course
FY	fiscal year
HPCA	Hospice Palliative Care Association of South Africa
NDOH	South Africa’s National Department of Health
PEPFAR	President’s Emergency Plan for AIDS Relief
TB	tuberculosis
TSR	treatment success rate
URC	University Research Co., LLC
WHO	World Health Organization

SUMMARY OF RESULTS

According to the World Health Organization (WHO), South Africa has more cases of tuberculosis (TB) than any country except India and China and the highest number of people living with HIV and AIDS. The two diseases are mutually reinforcing: HIV-positive individuals are 20 to 40 times more likely to develop TB than are people who do not have HIV because a weakened immune system cannot keep the TB bacteria in check, and active TB in turn can accelerate the course of HIV. In 2010, an estimated 60 percent of patients diagnosed with TB in South Africa were already infected with HIV.¹

With programs already targeting HIV and AIDS, USAID/Southern Africa modeled its TB program for South Africa on the U.S. Government's global TB strategy for 2009-2014² and redoubled efforts to integrate TB and HIV services. According to its fiscal year (FY) 2011 performance plan and report, the mission's short-term goal was to help strengthen South African health systems and capacity in several areas critical to a fully functional TB control program, including controlling infection at service delivery points. The report also reiterated the U.S. Government's long-term goal of raising the TB treatment success rate (TSR) to 85 percent. The TSR, the proportion of patients who complete their entire treatment course for TB, is a key indicator of the effectiveness of TB programs.

To conduct TB-related activities, USAID/Southern Africa entered into agreements with 13 implementing partners. This audit focused on the three partners listed in the following table. As of September 30, 2011, the mission had obligated \$121.4 million and spent \$106.0 million on the three implementers' activities.

Audited Implementing Partners and Activities

Implementing Partner	TB- Related Activities/Goals	Dates	Total Amount of Agreement (\$ million)
University Research Co., LLC (URC)	Provide technical assistance to increase the quality and availability of TB services, raise the demand for TB treatment, and improve the management of TB support systems.	9/28/2009 to 9/28/2014	64.6
Hospice Palliative Care Association of South Africa (HPCA)	Provide direct palliative care such as prevention and treatment of opportunistic infections, including TB, to patients with HIV and their families; conduct risk assessments and establish infection control plans including measures for improving ventilation and making minor renovations.	12/15/2009 to 12/30/2012	32.7

¹ Information in this paragraph comes from WHO's *Global Tuberculosis Control 2011*; the *Lantos-Hyde United States Government Tuberculosis Strategy*, March 24, 2010; the Web site of the Joint United Nations Programme on HIV/AIDS (www.unaids.org/en/regionscountries/countries/southafrica), and the WHO South Africa Tuberculosis Profile (www.who.int/tb/data).

² Tom Lantos and Henry J. Hyde United States Global Leadership Against HIV/AIDS, Tuberculosis, and Malaria Reauthorization Act of 2008, Public Law 110-293.

Implementing Partner	TB- Related Activities/Goals	Dates	Total Amount of Agreement (\$ million)
BroadReach Healthcare	Improve the care and treatment of HIV-positive patients with TB by strengthening the TB skills of health professionals, increasing the capacity of facilities in testing and identifying TB patients, and strengthening linkages between TB and HIV health-care activities.	10/1/2007 to 9/30/2012	98.2

The Regional Inspector General/Pretoria conducted this audit to determine whether USAID/Southern Africa's TB activities were strengthening systems and capacity in several areas critical to a fully functioning TB control program, including controlling infection at service delivery points.³

The audit confirmed that the mission's activities were strengthening systems and capacity in several critical areas, including infection control. For example, the mission trained health-care personnel in TB case management (including management of drug-resistant TB), TB/HIV collaboration, and infection control. USAID also helped the South African Government develop patient registers and other data collection tools to manage its TB program effectively and integrate TB and HIV activities. Other activities were effective in improving laws, policies, regulations, and guidelines related to improved access and use of health services, including those for TB patients. To address infection control at service delivery points, one of USAID's implementing partners completed risk assessments, developed infection control plans, and monitored the implementation of infection control practices at supported health facilities.

Furthermore, examination of a statistical sample of files of registered TB patients showed that health-care personnel generally complied with South African guidelines for screening, diagnosing, and initiating treatment of TB. Audit testing confirmed, within a 5 percent margin of error for overstatement with 4 percent precision, the number URC reported of patients registered at sentinel surveillance sites⁴ who were diagnosed with TB and started the full course of treatment. The audit also noted that TB patients were either properly tested for HIV or not tested for legitimate reasons, such as age or previously known HIV status.

Despite these positive observations, the audit identified the following weaknesses:

- The mission was not on track to achieve the long-term goal of raising the TSR to 85 percent by 2014 (page 4). According to URC's 2011 annual report, the TSR improved only marginally from the previous year, from approximately 72 percent to 74 percent, falling short of its FY 2011 goal of 80 percent and USAID's FY 2011 average TSR of 86 percent in priority countries. According to mission officials, the average TSR has improved to more than 77 percent as of August 2012.
- Some reported data did not meet quality standards (page 5). The mission did not disclose known data limitations for one indicator, and some treatment data likely were invalid and unreliable because of a lack of clerks to validate and enter them.

³ Although USAID/Southern Africa is a regional mission overseeing programs in several countries, this audit focuses exclusively on bilateral programs conducted in the Republic of South Africa.

⁴ According to WHO, sentinel surveillance sites are institutions such as health-care facilities that are chosen according to their location (each represents a specific geographic area) and ability to provide government authorities with high-quality data on the spread of diseases the government monitors.

- One implementing partner calculated results incorrectly (page 7). The results were on indicators used to measure the effectiveness of TB/HIV activities funded by the President's Emergency Plan for AIDS Relief (PEPFAR)—indicators that differ from those the South African health facilities are used to reporting on.
- Some health-care facilities did not comply with infection control standards (page 9). The facilities were too small to segregate patients suspected of having TB or were in need of renovations that would allow them to ventilate rooms properly. If clinics expose patients to disease, South Africans will stop visiting them and forgo the diagnostic and treatment services that USAID supports.

To address these issues, the audit recommends that the mission:

1. Implement a plan with benchmarks and milestones for sustainably raising the TB TSR to 85 percent in U.S. Government-supported health-care facilities by September 28, 2014 (page 5).
2. Revise its annual performance plan and report for FY 2011 to disclose trends in the TSR and the number of TB cases at sentinel surveillance sites, and implement procedures to verify full disclosure in future reports (page 6).
3. Implement a cost-effective method for reasonably estimating the percentage of all registered TB patients that were tested for HIV in all facilities directly or indirectly supported by USAID (page 6).
4. Conduct and document training for its implementing partners on the correct calculation of PEPFAR TB/HIV indicators, and require that the implementing partners provide sufficient guidance on data collection for those indicators to the health-care facilities that they support (page 8).

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 10.

AUDIT FINDINGS

Mission Was Not on Track to Achieve Desired Treatment Success Rate

The TSR, the proportion of patients who complete their entire course of TB treatment, is widely acknowledged as a good indication of the effectiveness of a country's TB program. Consequently, one of the key results expected in URC's contract was to increase the TSR to 85 percent "at the national or sub-national level." Mission officials indicated that URC was to achieve this target by the end of its contract in 2014. For FY 2011, URC set an interim TSR goal of 80 percent.

Despite this expectation, the audit found that URC was not on track to raise the TSR to 85 percent by 2014. URC did not achieve its FY 2011 target of 80 percent. According to URC's 2011 annual report, the TSR improved only marginally compared with the previous year, from approximately 72 to 74 percent. Mission officials stated that URC supports 24 districts whose average TSR is more than 77 percent; one-third of those districts have rates between 80 and 84 percent.

The audit found that URC was not planning sufficient steps to meet the target. For example, URC's initial FY 2012 work plan did not mention TSRs. The subsequent submission set a TSR target of 85 percent but offered no specifics as to how it would be achieved. Furthermore, although URC officials said the organization sends teams out to locate patients who have not completed their treatment, it is unclear to what extent these efforts have actually improved treatment rates.

Other reasons for not meeting the target included the following:

- South African policy may discourage completion of TB treatment. South Africa pays stipends to individuals who have active TB and discontinues the stipend when the individuals are cured. The auditors heard anecdotal evidence that individuals sometimes choose not to complete their treatment for fear of losing their stipend.
- The implementation approach used by the mission and URC—district rotation—undercuts their ability to sustain improved treatment rates. URC typically works in the worst-performing districts and then moves to other districts when services improve. However, the rotation of trained URC and nursing staff to new districts erodes previous gains. According to the mission, South African officials are discussing including a training module in the nursing curriculum that is expected to help sustain any gains made by USAID and URC.
- The method for calculating the TSR may also result in lower reported rates. The TSR is based only on the districts that URC is assisting when the TSR is calculated. Thus, improvements in TSR for districts no longer assisted by URC are not captured in the overall reported TSR.

The mission's annual performance plan and report did not mention the missed target. Although the report stated that South Africa's current TSR is 73 percent among new patients, it omitted that URC, USAID's primary implementer of TB activities in South Africa, reported only a

marginal improvement in TSR between 2010 and 2011. It also omitted URC's annual goal of 80 percent for FY 2011. Furthermore, the report did not mention the goal of achieving an 85 percent TSR by the end of URC's contract on September 28, 2014.

Lower-than-desired treatment rates not only diminish the effectiveness of U.S. foreign assistance, but also have serious public health consequences for South Africans. According to the U.S. Centers for Disease Control and Prevention, efforts to control TB become counterproductive when TB patients do not complete their treatment and raise their risk of contracting multidrug-resistant TB and infecting others. According to URC's FY 2011 annual report, the default rate among re-treated TB patients increased from 13.6 percent in FY 2010 to 14.4 percent. This may have contributed to the lack of improvement in death rates among re-treated TB patients, which actually increased from 11.5 to 11.6 percent between FY 2010 and FY 2011. Given these circumstances, the audit makes the following recommendation.

Recommendation 1. *We recommend that USAID/Southern Africa implement a plan with benchmarks and milestones for sustainably raising the tuberculosis treatment success rate to 85 percent in U.S. Government-supported health-care facilities by September 28, 2014.*

Some Reported Data Did Not Meet Quality Standards

According to USAID's Automated Directives System 203.3.5.1, to be useful for managing and reporting, performance data should meet five quality standards—validity, integrity, precision, reliability, and timeliness. When data do not meet the standards, missions should document any known data limitations and plans for dealing with them so that program achievements can be assessed honestly. Such disclosure helps ensure transparency in programs and performance reporting, which is an important tenet of U.S. foreign assistance.

Despite these requirements, the audit found that the performance data the mission reported for its TB activities needed improvement. The FY 2011 annual performance plan and report did not disclose all known data limitations, and some data could be invalid and unreliable because they did not represent all facilities and had not been verified by data entry clerks.

Undisclosed Data Limitations. The report did not fully disclose data limitations on the following indicator: *Percentage of all registered TB patients who are tested for HIV*. The report stated that the mission's efforts to strengthen TB/HIV integration were effective, as 88 percent of TB patients registered at TB/HIV sentinel surveillance sites were tested for HIV. Elsewhere the report noted that 153,088 TB cases were reported by USAID-supported districts in FY 2011. From these facts, report readers could infer that 134,717 (88 percent of 153,088) registered TB patients were tested for HIV; in fact, only 57,511 were tested.

According to mission officials, 153,088 was the number of TB patients registered at approximately 1,200 health-care facilities in 21 districts receiving both direct and indirect U.S. Government assistance, while the 264 TB/HIV sentinel sites receiving direct assistance⁵ from URC registered only 65,354 TB patients.

⁵ Direct assistance means that URC staff visit the facility and provide assistance in reporting data.

To make readers aware of this indicator's limitations, the report should have detailed how the indicator was calculated. Specifically, the report should have:

- Clarified that sentinel sites were not the only ones receiving U.S. Government assistance.
- Specified that sentinel surveillance sites tend to have better capabilities in diagnosing and reporting high-quality data and are not representative of all health-care facilities.
- Made clear that because some facilities receive only indirect U.S. Government assistance, their testing rates for TB patients are not solely the results of that assistance.

In fact, the USAID contracting officer's representative for the URC contract confirmed that the HIV testing rate of TB patients in indirectly supported facilities during FY 2011 was unknown because URC did not have access to data in these facilities. According to mission officials, South African government officials do not easily give partners access to data at facilities they do not directly support.

According to mission officials, these statements in the annual report were not intended to mislead readers; rather, they were oversights made during report preparation. Further, officials said that limited space in the reporting template for the narrative and footnotes sometimes prevented full disclosure. Nevertheless, mission officials agreed they should have disclosed all the indicator's limitations in the annual performance plan and report.

In addition to helping the mission meet statutory requirements in the Government Performance and Results Modernization Act of 2010, the annual performance plan and report fulfills other objectives. For example, the report helps identify best practices and lessons learned from field activities and assists USAID and Department of State officials in responding to inquiries from Congress and the public. Omitting relevant data limitations diminishes the usefulness of the report.

Furthermore, HIV testing of TB patients is a widely recognized component of international TB control and a significant part of the U.S. Government's TB control strategy, particularly in countries where the U.S. Government is implementing HIV/AIDS-related assistance. If the mission does not know whether or to what extent its indirectly supported health-care facilities are testing TB patients for HIV, it cannot evaluate how well TB and HIV activities are being integrated. In its FY 2011 report, URC noted rising death rates among re-treated TB patients, which could be a result of poor TB/HIV integration.

The audit makes the following recommendations.

Recommendation 2. We recommend that USAID/Southern Africa (1) revise its annual performance plan and report for fiscal year 2011 to disclose trends in the treatment success rate and the number of tuberculosis cases at sentinel surveillance sites and (2) implement procedures to require full disclosure in future reports.

Recommendation 3. We recommend that USAID/Southern Africa implement a cost-effective method for reasonably estimating the percentage of all registered tuberculosis patients tested for HIV in all facilities directly or indirectly supported by USAID.

Lack of Data Capturers. URC's contract with USAID included strengthening directly observed treatment short course (DOTS). DOTS is a worldwide approach to TB control with five components, one of which is sustained political and financial commitment. South Africa's strategic plan for TB control describes political commitment as, among other things, helping ensure that sufficient financial and human resources are available. Given the importance of accurate data in all phases of TB control, having adequate personnel to collect and record data is a critical element in the DOTS strategy.

Nonetheless, data entry clerks were scarce at health facilities. Nearly one-third (6 of 19) of the health facilities visited by the audit team lacked a dedicated data entry clerk. Other facilities also reported sharing a clerk with two or more facilities.

According to mission officials, provincial governments could not pay data entry personnel. A South African health official said the national government trained more than 1,100 clerks in 2007 and 2008 to alleviate the problem. According to this official, although the national government placed the trained clerks in facilities and paid them for 1 year, the provincial governments did not take over their salaries as agreed because of a lack of funding.

Additionally, in 2011 URC sent data entry clerks to North West and KwaZulu-Natal Provinces. URC's understanding was that these employees eventually would be put on the public payroll. However, they were not, again because of budgetary constraints. URC reported that sometimes only 50 percent of data was recorded from some districts because of the lack of data entry clerks. In its report for the quarter ended June 30, 2011, URC stated that in most districts data entry clerks were absent because their contracts with the national government expired in May.

Officials at facilities visited by the audit team said that the lack of data entry clerks created data backlogs. Several officials acknowledged there were usually differences between the TB data in the national database and the facilities' own records, resulting in an inaccurate reflection of the facility's performance. These officials said that the differences could have adversely affected reported cure rates, default rates, and TSRs, possibly rendering these measures invalid or unreliable.

Data entry clerks are critical to the TB program because they collate and validate data before entering them into electronic TB registers. Without clerks, TB data may not be entered into the national database, resulting in incomplete reporting and ultimately weakening the country's ability to control TB. Without accurate, reliable, and timely information, decision makers cannot determine resources or interventions needed to combat the disease. Mission officials are aware of the situation and, in their talks with South African officials, continue to emphasize the importance of data entry clerks. Because the mission is doing what it can to address this issue, the audit makes no recommendation on it.

One Implementing Partner Incorrectly Calculated Results

USAID/Southern Africa uses a standardized set of TB/HIV indicators for PEPFAR reporting. These TB/HIV indicators are defined in PEPFAR's August 2009 *Next Generation Indicators Reference Guide*. This guide contains detailed information on how to calculate results on PEPFAR indicators, such as definitions of numerators and denominators, methods of measurement, and the indicators' purpose and interpretation.

For one indicator, *Percent of HIV-positive patients who were screened for TB in HIV care or treatment settings*, the PEPFAR guide defines the numerator as the number of HIV-positive patients screened for TB at their last visit during the reporting period. It defines the denominator as the number of HIV-positive patients receiving a minimum of one clinical service, which includes TB screening. Given these definitions, the reported result should not exceed 100 percent.

Despite this guidance, BroadReach Healthcare reported a first quarter FY 2012 result of 139 percent. This error occurred because facilities supported by BroadReach counted in the numerator all TB screenings for HIV-positive persons during the reporting period, rather than just screenings at the last visit for HIV-positive persons in care and treatment as specified in the guide. Moreover, BroadReach defined the denominator as the number of individuals testing positive for HIV, also contrary to the PEPFAR guide. With values exceeding 100 percent, such data are not useful for program managers.

Another indicator—*Percent of HIV-positive patients in HIV care or treatment who started TB treatment*—helps track the share of HIV-positive patients who are diagnosed with active TB and receive treatment. According to the PEPFAR guide, the numerator is the number of HIV-positive patients (adults and children) started on TB treatment, while the denominator is the number of HIV-positive patients receiving a minimum of one clinical service.

For this indicator, BroadReach Healthcare reported a result of 102 percent for FY 2011. Although the numerator was based on the number of people with both HIV and TB who started on TB treatment, the denominator, contrary to the PEPFAR guide, was the number of HIV-positive individuals diagnosed with active TB.

According to BroadReach Healthcare officials, health-care facilities made mistakes in data collection and reporting. Mission officials also stated there are many challenges in reporting on these indicators. For example, the mission uses only the two TB/HIV indicators mentioned above, while the South African Government uses seven. These seven are quite different from the mission's indicators, further complicating tracking and reporting.

Because facilities did not follow the PEPFAR guide in calculating results, the indicators cannot be used as intended to assess program effectiveness and identify needed improvements. For example, the two TB/HIV indicators reported by USAID/Southern Africa on TB screening and TB treatment among HIV-positive patients are designed to be used in tandem. According to the PEPFAR guide, if TB screening increases, TB treatment should also increase. Conversely, a decrease in TB treatment may indicate poor integration of TB and HIV services, such as a failure to screen HIV patients for TB and initiate treatment. However, if the two indicators are not computed in accordance with the PEPFAR guide, they cannot be used to assess performance or pinpoint weaknesses. Given the importance of linking TB and HIV services in improving health outcomes in South Africa, the ability to find and correct weaknesses is vital. Accordingly, this audit makes the following recommendation.

Recommendation 4. *We recommend that USAID/Southern Africa conduct and document training for its implementing partners on the correct calculation of the President's Emergency Plan for AIDS Relief tuberculosis and HIV indicators and require that the implementing partners provide sufficient guidance on data collection for those indicators to the health-care facilities that they support.*

Some Facilities Did Not Comply With Infection Control Standards

Infection control and management are critical in preventing the spread of TB. The *Lantos-Hyde United States Government Tuberculosis Strategy* lists implementation of international TB standards for infection control in target countries as a key goal.

South Africa's National TB Infection Control Guidelines, issued in June 2007, list interventions that health facilities can use to prevent spreading TB. Some interventions include placing those with suspected TB in separate waiting areas and having open, cross-ventilating windows.

In keeping with the U.S. strategy and South African guidance, the mission's implementing partners were responsible for conducting baseline TB infection control assessments and sharing the results with the National Department of Health. These assessments were to review components of infection control such as supporting activities, administrative controls, and environmental controls. Supporting activities include basic elements such as having an infection control plan and raising community awareness of infection control. Administrative controls refer to strategies, such as educating patients on cough hygiene, to reduce the spread of germs that cause TB. Environmental controls include adequate ventilation in health facilities, use of ultraviolet germ-killing radiation in high-risk service areas, and appropriate patient flow.

Although URC, BroadReach Healthcare, and HPCA conducted risk assessments, infection control audits, and developed infection control plans, nearly half of the health-care facilities (10 of 22) visited by the audit team did not comply fully with infection control guidelines, particularly for segregating TB patients.

According to health-care personnel, these facilities did not comply with the guidelines because they were too small to segregate TB patients and needed major structural renovations. Renovations are the responsibility of the South African Government, not USAID. Although renovation work is outside the scope of URC's contract with USAID, URC officials noted in the assessments they gave South African officials that the health centers needed major structural improvements and renovations to comply with TB infection control guidelines.

If facilities do not comply with infection control guidelines, the mission's goals for its TB activities may not be met. South Africans could lose confidence in publicly managed health facilities and avoid seeking treatment if they are aware that they may be exposed to TB there. Further, the U.S. Government has spent significant resources to assess risks at health-care facilities and develop action plans. Such expenditures are of little value if the South African Government is unable or unwilling to implement recommendations resulting from those assessments.

Mission officials said they were already aware that some facilities did not comply with guidelines because the facilities were too small or needed renovations. Instead, USAID was focusing on increasing knowledge of control measures such as hand washing that could be implemented despite the facilities' structural limitations. South African officials, too, were aware that structural renovations were needed at many health facilities and said they planned to address this issue. Because USAID continues to engage with South African officials regarding needed structural improvements at some health facilities, the audit makes no recommendation on this matter.

EVALUATION OF MANAGEMENT COMMENTS

In its comments on the draft report, USAID/Southern African agreed with all four recommendations. We agreed with the management decisions made by the mission.

Recommendation 1. USAID/Southern Africa agreed with the recommendation, but pointed out that the U.S. Government relies on data from South Africa's National Department of Health (NDOH), which may be underreported. A memorandum of understanding between the NDOH and the U.S. Government is being developed to give the partners access to NDOH databases and a greater role in data collection and reporting. The mission expects its partners to have developed benchmarks and milestones that are aligned with South African Government indicators by January 31, 2013. We agree with the management decision for Recommendation 1.

Recommendation 2. USAID/Southern Africa agreed with the concept of the recommendation but highlighted that the omission was not intentional and amendments to the annual report are not possible after a certain period. However, by December 15, 2012, the mission plans to submit a letter with a footnote to the program office to document the trends in the treatment success rate and the number of TB cases at sentinel surveillance sites. We agree with the management decision for Recommendation 2.

Recommendation 3. USAID/Southern Africa agreed to implement this recommendation only for the health facilities that the mission supports and not all U.S. Government-supported facilities as originally recommended. We agree with this change and revised the recommendation accordingly. By December 31, 2012, the mission plans to use data from the NDOH database to estimate the percent of registered TB patients tested for HIV. We agree with the mission's plans since obtaining this data from indirectly supported facilities may not be cost-effective, and thus agree with the management decision for Recommendation 3.

Recommendation 4. USAID/Southern Africa agreed with the recommendation and is in the process of aligning its indicators with those of the South African Government. The mission plans to complete this alignment, provide guidance to all its partners, and meet with partners about these indicators by April 30, 2013. We agree with the management decision for 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/Southern Africa's TB activities were strengthening systems and capacity in several areas critical to a fully functioning TB control program, including infection control at service delivery points. We conducted audit fieldwork from February 10 to May 3, 2012, at USAID/Southern Africa and the implementing partners' offices in Pretoria and Cape Town. We conducted site visits to 22 health facilities in Gauteng, KwaZulu-Natal, Free State, Eastern Cape, and Western Cape Provinces. Specifically, we visited 19 facilities directly supported by URC in Gauteng, KwaZulu-Natal, Free State, and Eastern Cape Provinces, 2 facilities directly supported by BroadReach Healthcare in KwaZulu-Natal, and 1 facility supported by HPCA in Western Cape.

This audit focused on TB activities implemented in FY 2011 and FY 2012 through USAID's Child Survival and Global Health (CSH) and PEPFAR funds. In FY 2011, the mission received approximately \$25.8 million (\$15.6 million from PEPFAR and \$10.2 million from USAID's CSH) to implement TB activities. Overall, the mission funds 13 partners to implement TB activities. The audit team selected three implementing partners for detailed review that were significant contributors to both TB activities and TB/HIV integration. The audit selected URC because it is the primary partner for TB activities, reports on all three TB indicators and both PEPFAR TB/HIV indicators, and reports on the TSR. The audit selected HPCA because it reports on the first PEPFAR indicator (Indicator 5 on page 13) and BroadReach Healthcare because it reports on the two TB/HIV PEPFAR indicators. As shown in the table below, these partners received approximately \$15.4 million or 60 percent of FY 2011 funding. The audit covered approximately 45 percent of activities funded by PEPFAR and 88 percent of activities funded by CSH (excluding WHO) in FY 2011.⁶

**Amount of FY 2011 Funding Received
by Selected Implementing Partners (Audited)
(\$)**

Implementing Partner	CSH Funding	PEPFAR Funding	Total FY 2011 Funding Received
URC	7,100,000	5,375,641	12,475,641
HPCA	1,350,000	103,596	1,453,596
BroadReach Healthcare	0	1,456,931	1,456,931
Total	8,450,000	6,936,168	15,386,168

⁶ The mission also provided funding to WHO, but since we do not have audit rights to that organization, we did not include them in our sample.

In planning and performing the audit, we assessed USAID/Southern Africa's internal controls. Specifically, we reviewed and inquired about the mission's reporting required by the Federal Managers' Financial Integrity Act of 1982, which provided detail on the mission's administrative management, financial management, programming, and general control environments. We also obtained an understanding of and evaluated the mission's monitoring and evaluation procedures and reporting processes. This included obtaining and reviewing documentation to support mission strategic planning, the designation of agreement and contracting officer representatives, the completion of data quality assessments, the performance of site visits, the documentation of meetings with implementing partners, the submission of periodic performance reports, and the scheduling and completion of program evaluations.

Methodology

To answer the objective, Regional Inspector General/Pretoria interviewed officials from USAID/Southern Africa, the South African Government, and implementing partners to gain an understanding of the mission's TB activities as well as to identify the key performance indicators used to measure the contribution of those activities to meeting the main goals of the program.

We also reviewed the implementing partners' agreements, work plans, and progress reports. In addition, we reviewed applicable laws, regulations, and USAID and South African National Department of Health policies and procedures pertaining to USAID/Southern Africa's TB activities, including USAID Automated Directives System Chapters 200 through 203, the *Lantos-Hyde United States Government Tuberculosis Strategy*, and the South African National Department of Health's National Tuberculosis Management Guidelines 2009 and National TB Infection Control Guidelines, issued in June 2007.

During site visits, we interviewed facility managers, doctors, nurses, data entry personnel, and health-care workers. We also met with provincial and district officials from the South African National Department of Health.

We tested the validity and accuracy of the reported results for five performance indicators, three focusing on TB activities and two focusing on the TB/HIV integration:

TB Indicators

1. *Number of improvements to laws, policies, regulations or guidelines related to improved access and use of health services drafted with U.S. Government support.*
2. *Number of people trained in DOTS with U.S. Government funding.*
3. *Percentage of all registered TB patients who are tested for HIV through U.S. Government-supported programs.*

TB/HIV Indicators

4. *Percent of HIV-positive patients who were screened for TB in HIV care or treatment settings.*
5. *Percent of HIV-positive patients in HIV care or treatment (preantiretroviral therapy or antiretroviral therapy) who started on TB treatment.*

For Indicator 3, we tested the denominator in the percentage by examining a statistical sample of 83 of the 65,354 TB patients registered at 264 URC-supported TB/HIV health-care sentinel surveillance sites for FY 2011. To aid us in our testing and in reaching our conclusions, we used statistical sampling. Our sample included a mix of facilities from both rural and urban areas in four provinces (Gauteng, KwaZulu-Natal, Free State, and Eastern Cape) and serving patients of various socioeconomic strata. The number of registered TB patients selected for testing in each province was proportional to the total number of registered TB patients in selected districts in those four provinces. The results of this sample are representative of the population from which the sample was drawn and thus can be projected to the population.

The test had a 95 percent confidence interval and 4 percent precision. Using the same sample, we also tested whether the TB patients were tested for HIV, but we made no projections for this portion of the test.

Our tests confirmed the reported results for the three indicators focusing on TB activities. However, we were unable to determine whether the two TB/HIV indicators were fairly stated because other implementing partners report on these indicators; those partners were outside the scope of this audit; and other factors affected the quality of the data, as described in the finding on page 5.

The lack of data entry personnel described on page 7 did not affect our statistical test regarding the 65,354 registered TB patients described above because we tested for overstatement, not understatement. The lack of data entry personnel leads to understating, rather than overstating results.

To determine whether USAID/Southern Africa had achieved its main short-term goal of helping strengthen South African systems and capacity in several areas critical to a fully functioning TB control program, including infection control at service delivery levels, we examined selected outputs to see whether they had met their annual targets. We then determined whether those outputs that met their targets were supported by sufficient, appropriate evidence. Outputs selected included the number of registered TB patients tested for HIV and number of improvements to laws, policies, regulations, and guidelines related to improved access to health services.

In determining whether the mission had achieved, or was on track to achieving, its long-term goal of raising the TSR to 85 percent by 2014, we determined where the rate stood in relation to the annual target of 80 percent as of September 30, 2011, as reported by the implementing partner, URC.

MANAGEMENT COMMENTS



September 10, 2012

Memorandum

From: Jeff Borns, Mission Director /s/

To: Regional Inspector General/Pretoria: Robert Mason

Subject: Audit of USAID/Southern Africa's Tuberculosis Activities (Report No. 4-674-12-XXX-P)

This memo transmits USAID/Southern Africa's written comments on the recommendations made under the subject audit.

Recommendation 1. We recommend that USAID/Southern Africa develop and implement a plan, with benchmarks and milestones, for sustainably raising the tuberculosis treatment success rate to 85 percent in U.S. Government-supported health care facilities by September 28, 2014.

We accept this recommendation; however it should be made clear that the USG relies on the NDOH's ETR.net system for data. Unfortunately there are indications that there is underreporting between the various reporting levels – hence reporting under the targets. To improve the situation, an MOU is currently in process with the NDOH and the USG to allow partners to have access to the ETR.net and thus be able to assist with data capturing, aggregation, verification and reporting. In addition, the plan for partners to develop SAG aligned benchmarks and milestones will be developed by January 31, 2013.

Recommendation 2. We recommend that USAID/Southern Africa revise its annual performance plan and report for the fiscal year ended September 30, 2011, to disclose trends in the treatment success rate and the number of tuberculosis cases at sentinel surveillance sites; and develop and implement procedures to help ensure full disclosure in future reports.

We understand why this recommendation was made, however, we are concerned with the way this is phrased as there was no intention to mislead the reader, and the omission was not deliberate. The reporting database has a character limit for providing additional information. In addition, after a set period the report is closed and no further amendments are allowed. In response to this recommendation, a letter with a footnote will be sent to PPDO for the APPR files to show trends in the treatment success rates and the number of TB cases at sentinel surveillance sites; this will be done December 15, 2012.

Recommendation 3. We recommend that USAID/Southern Africa develop and implement a cost-effective means for reasonably estimating the percentage of all registered tuberculosis patients that were tested for HIV in all U.S. Government directly and indirectly supported facilities.

We accept this recommendation, but only for USAID/Southern Africa supported facilities and not for all U.S. Government supported facilities. USAID/Southern Africa will use data from ETR.net to estimate the percentage of registered TB patients tested for HIV. Please note previous comments on the quality of data from ETR.net and all supported partners will submit data on direct and indirect services for HIV testing. In an effort to be cost effective, USAID /Southern Africa will not establish a parallel system to capture this information.

Recommendation 4. We recommend that USAID/Southern Africa conduct training for its implementing partners on the correct calculation of the President's Emergency Plan for AIDS Relief TB/HIV indicators and require that the implementing partners provide sufficient guidance on data collection for those indicators to the health care facilities that they support.

We accept this recommendation. Although this problem is unique to one partner, we will use this example to share with all partners. Furthermore, we are in the process of aligning the indicators with the SAG indicators, and this particular indicator is exactly like the SAG indicator. Once the guidance is out, it will be sent out to all partners and a meeting will be held.

Finally, I would like to thank you and your staff for the collaborative way in which this audit was conducted, and the useful nature of the recommendations.

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