USAID FROM THE AMERICAN PEOPLE | TUBERCULOSIS PROGRAM SOUTH AFRICA

Annual Report (1 October 2012 to 30 September 2013)

CONTRACT NUMBER - 674-C-00-09-00121-00

Prepared for:

Nellie Gqwaru, COTR

USAID South Africa

Pretoria

South Africa

Submitted by:

Dr. Mpho Ratshikana-Moloko

University Research Co., LLC

Pretoria, South Africa

October 10, 2013

TABLE OF CONTENTS

LIST OF ACRONYMS ..... **IV**
1 BACKGROUND **8**
2 EXECUTIVE SUMMARY **8**
2.1 IR 1: Increased Quality of TB Services **9**
2.2 IR 2: Increased availability of TB services **9**
2.3 IR 3: Increased Demand of TB services **10**
2.4 IR 4: Improved Management of TB Support Systems **10**
2.5 IR 5: Tested New Approaches for Expanding DOTS Coverage **10**
3 INTRODUCTION **11**
4 OVERALL PROJECT PERFORMANCE **12**
4.1 Performance by Geographic Coverage **12**
4.2 Progress on USAID overall Targets **12**
4.3 Performance by Intermediate Results **14**
4.3.1 IR 1- Improved quality of TB services: 14
4.3.2 IR 2- Increased availability of TB services 25
4.3.3 IR 3- Increased demand of TB services 31
4.3.4 IR 4 Improved Management of TB Support Systems 37
4.3.5 IR 5: Tested New Approaches for Expanding DOTS Coverage 39
5 CHALLENGES **42**
5.1 Administrative challenges and Problems resolution .... Error! Bookmark not defined.
5.1.1 Administrative ..... **Error! Bookmark not defined.**
5.2 Implementation Challenges and Problem Resolution **42**
5.2.1 Patient Management: 42
5.2.2 TB/HIV Collaboration: 42
5.2.3 Management and Information Systems 42
6 COMMON AGENDA ITEMS **43**
6.1 Project Administration **43**
6.1.1 Conferences 43
6.2 Coordination with Local and Other Stakeholders **43**
7 PROJECT PLANS FOR THE NEXT YEAR (FY14) **44**

List of Tables

Table 1: Project Overall - Indicators progress summary, FY13 12
Table 2: Trainings conducted in FY13 25
Table 3: IPT guidelines changes 28
Table 4: Eastern Cape MDR-TB 2012 Data 31
Table 5: Summary of IEC materials printed 33
Table 6: NGO allocation by project focus areas 34
Table 7: Wagon of Hope - Intensified Case Findings in the Community 36
Table 8: Before and after – BC 38
Table 9: Before and after – Smear Conversion for new SS+ cases 38
Table 10: Before and after – Treatment Outcomes for new SS+ 39

List of Figures

Figure 1: USAID TB Allocated Districts by Province 12
Figure 2: Total TB Cases by Site in all Districts- Jan 2009 - June 2013 13
Figure 3: Project overall - Bacteriological coverage and smear not done, FY09 to FY13 17
Figure 4: Bacteriological coverage FY12 & FY13 - districts supported 18
Figure 5: Project Overall - Smear conversion FY09 to FY13 19
Figure 6: Greater Sekhukhune - Investigation on high non-conversion 20
Figure 7: Smear conversion rates - reporting units, FY12 & FY13 20
Figure 8: Project overall - Treatment outcomes, FY09 to FY13 22
Figure 9: TSR for new SS+ cases for uMgungundlovu District, FY09 to FY13 22
Figure 10: TSR for new SS+ cases for eThekwini District, FY09 to FY13 23
Figure 11: Project overall: TB entry point, Q3/2012 to Q4//2013 27
Figure 12: ART uptake for reporting units, Q1/2013 & Q2/2013 27
Figure 13: TB entry point for Amathole District, Q3/2012 to Q4/2013 28
Figure 14: HIV entry point, Q3/2012 to Q4/2013 29

LIST OF ACRONYMS

3Is	Intensified case finding, Isoniazid preventive therapy and Infection control
ACSM	Advocacy, Communication and Social Mobilization
AIDS	Acquired Immunodeficiency Syndrome
ART	Antiretroviral Therapy
ARV	Antiretroviral treatment
BC	Bacteriological Coverage
c-PMDT	Community Programmatic Management of Drug-resistant TB
CAT	Community Action Team
CBO	Community-Based Organization
CBS	Community Based Services
CCMT	Comprehensive Care Management and Treatment
CCW	Community Health Care Workers
CDC	Centre for Disease control
CHAI	Clinton Health Access Initiatives
CHC	Community Health Centre
CPT	Co-trimoxazole Preventative Therapy
CWD	Cape Winelands District
DCS	Department of Correctional Services
DENOSA	Democratic Nurses Organisation of South Africa
DHIS	District Health Information System
DoH	Department of Health
DOT	Directly Observed Treatment
DOTS	Directly Observed Treatment Short-course
DR-TB	Drug Resistant Tuberculosis
DRAT	District Rapid Assessment Tool
DRS	Drug Resistant Survey
DST	Drug Susceptibility Testing
EC	Eastern Cape Province
EDR	Electronic Drug Resistance Register
ETR	Electronic TB Register
FS	Free State Province
GP	Gauteng Province
GXP	GeneXpert
HAST	HIV, AIDS, and Sexually Transmitted Infections and TB
HCT	HIV Counselling and Testing
HCW	Health Care worker
HIV	Human Immunodeficiency Virus

HOSPERSA	Health & Other Services Personnel Trade Union of South Africa
HST	Health Systems Trust
IC	Infection Control
ICF	Intensified Case Findings
IEC	Information, Education, and Communication
ILO	International Labour Organization
IPT	Isoniazid Preventive Therapy
IR	Intermediate Results
IUATLD	International Union against Tuberculosis and Lung Disease
IYA	Imbumbe Yamakhosikazi Akomkhulu
JHHESA	John Hopkins Health and Education South Africa
KZN	Kwa-Zulu Natal Province
LOP	Life of Project
LP	Limpopo Province
M&E	Monitoring and Evaluation
MDR-TB	Multi-drug Resistant Tuberculosis
MIS	Management Information System
MOU	Memorandum of Understanding
MPU	Mpumalanga Province
NC	Northern Cape Province
NDOH	National Department of Health
NEC	National Expansion Coordinator
NGO	Non-Governmental Organization
NHLS	National Health Laboratory Service
NMBHD	Nelson Mandela Bay Health District
NTCP/ NTP	National Tuberculosis Control Program
NW	North West Province
PDOH	Provincial Department of Health
PDSA	Plan, Do, Study and Act
PEPFAR	President Emergency Plan for AIDS Relief
PHC	Primary Health Care
PPM	Public – Private Mix
PSA	Public Service Announcement
PTB	Pulmonary Tuberculosis
SABCOHA	South African Business Coalition
SAG	South African Government
SCR	Smear Conversion Rate
SND	Smear Not Done
SO	Strategic Objectives

SS+	Smear Positive
STI	Sexually Transmitted Infections
TAT	Turn Around Time
TB	Tuberculosis
THP	Traditional Health Practitioners
TOT	Training of Trainers
TSR	Treatment Success Rate
URC	University Research Co., LLC
USAID	United States Agency for International Development
VCT	Voluntary Counselling and Testing
WAD	World AIDS Day
WC	Western Cape Province
WHO	World Health Organization
XDR-TB	Extensively Drug-Resistant TB

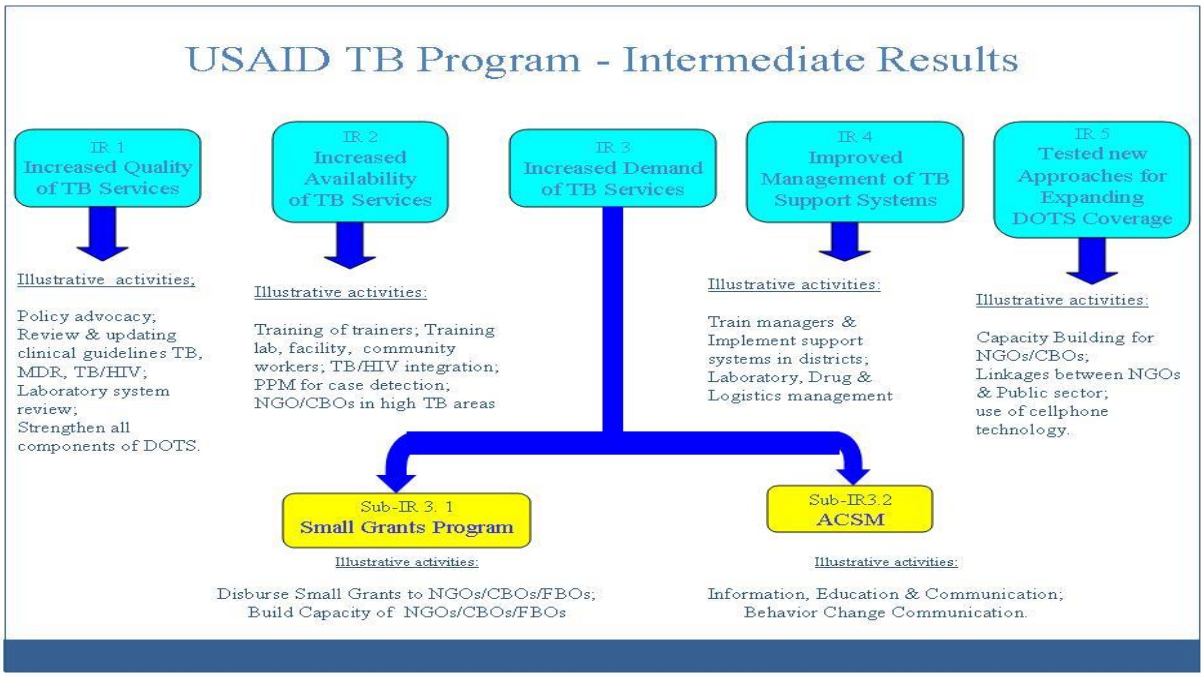
1 BACKGROUND

In 2012, South Africa reported 349,582 cases of tuberculosis (TB) -- 296,996 new TB cases and 52,586 re-treatment TB cases. The incidence for 2012 was 1003/100,000; with mortality of 168/100,000. The treatment success rate (TSR) for new smear positive (SS+) cases has remained at 79%, comparable to the rate reported in 2010. Similarly, TB/HIV indicators have stagnated. HIV testing for TB patients is at 84%, with 65% of TB patients co-infected with HIV. Co-trimoxazole uptake for co-infected patients is 75.1% while Antiretroviral Therapy (ART) uptake is 54.0% in FY13, a 10% increase from 44.4% reported in FY12. Positive policy changes in 2012 have made ART available to all co-infected patients regardless of CD4 count level. The United States Agency for International Development (USAID) TB Program South Africa continues to provide technical assistance to the South African Government (SAG) in line with the National Strategic Plan (NSP).

2 EXECUTIVE SUMMARY

This report details the activities undertaken, results achieved, and challenged encountered by the USAID TB Program South Africa from October 2012 to September 2013 (FY13). *Annexure 1– Umgungundlovu Success on TB Program implementation* – is also included with this report.

The activities implemented were guided by the Strategic Objectives (SO) and the related Intermediate Results (IRs) of the USAID TB Program as reflected below:



During FY13, the USAID TB Program identified districts facing major challenges and outlined priority activities to address these challenges. The implementation plans for these districts were monitored and modified throughout the year to ensure that improvement occurred. One major focus area was implementation of infection control to reduce the risk of TB infection in the facilities. The project introduced a TB appointment diary to identify facility successes and challenges. The project has also designated certain "champion facilities" which are being provided with monthly supportive supervision and mentoring. A total of 52 project-supported grantees are providing support to communities linked to 183 facilities throughout the country. Funding has also been provided to non-

governmental organizations (NGOs) to support public-private mix (PPM) TB/HIV activities in the workplace. The project has appointed a Director of Technical Services.

A summary of the project performance results according to the expected IRs is provided below.

2.1 IR 1: Increased Quality of TB Services

Project performance: The overall TSR achieved in FY13 is 78.8%, compared to 77% in FY12, and 71% in FY10 respectively for the new SS+ cases. The project is however approximating the target TSR of 80%, with a 79.8% TSR reported in Q4/2013. Twelve of the 24 districts have achieved the treatment success rates (TSR) compared to seven in Q4/2012, while ten districts have achieved the 75% TSR compared to eight in Q4/2012. TSR in champion facilities surpassed the target in four districts; uMgungundlovu (93.2%), Gert Sibande (83.0%), Sedibeng (80.8%) and Greater Sekhukhune (80.0%).

For smear conversion rate (SCR), the project has achieved its target of 75%, reporting 75.8% in FY13, compared to 74.2% in FY12. Fourteen districts achieved or surpassed the 75% target for SCR. The loss-to-follow up (defaulter) rate improved to 6.8% in FY13, comparable to 7.7% in FY12; with improvements noted in Nkangala, Mangaung, Amathole, Xhariep and Waterberg Districts.

2.2 IR 2: Increased availability of TB services

Capacity building: In FY13, a total of 8,566 health care workers (HCW) and community workers were trained in all nine provinces, achieving the targets set for both - USAID (3500) and President's Emergency Program for AIDS Relief (PEPFAR) (2000). To support implementation of infection control (IC) guidelines, training was conducted for 1009 (target 1000) HCWs. Jointly with The International Union against TB and Lung Disease (IUATLD), the project trained managers on Principles of TB Control, Strengthening TB/HIV Collaborative Activities, Management and Finance for TB Control, and clinicians on Clinical Multi-drug Resistant (MDR) TB Management. To ensure integration of basic TB management in the nursing curriculum, training conducted for 182 nurse educators in all nine provinces.

Ensure functional TB/HIV Integration: A total of 375,606 HIV clients received HIV related care during FY13. To identify those with presumptive TB, symptomatic screening was offered to 366,373 (97.5%) HIV clients, while Isoniazid Preventive Therapy (IPT) was provided for 130,578 HIV clients who were found not to have TB.

During FY13, 133,842 TB patients were registered, 113,358 (85.7%) of whom were tested for HIV and had the status recorded in the TB registers. Fourteen districts have achieved 90% HIV testing rate for TB patients. Provision of ART to co-infected patients improved slightly to 58.8% by Q4/2013, with four districts showing improvements and reporting ART uptake of more than 70%; Amathole (85.6%), Nelson Mandela Bay Health District (NMBHD) (80.1%), Thabo Mofutsanyane (79.9%) and uMgungundlovu (71.9%).

Multi-drug Resistant (MDR) TB:

The USAID TB Program supported the implementation of community programmatic management of DR TB (c-PMDT). This successful establishment of the Master trainer program resulted in the certification of 20 master trainers, who in turn trained 194 clinicians. A data officer was contracted to support and address data challenges on MDR TB in the Eastern Cape (EC) Province.

Laboratory Diagnostics:

Monitoring of the GXP implementation in Waterberg District identified key challenges which have also been identified in other districts. Training on diagnostics was scaled up following training of URC staff as trainers to address the challenges identified which involve GXP, with 559 HCWs trained

during FY13. The impact of the GXP on the key indicators including BC and treatment outcomes is continuously addressed during trainings.

2.3 IR 3: Increased Demand of TB services

***Advocacy, Communication and Social Mobilization (ACSM)*:** During FY13, two 30 seconds' public service announcements (PSA) were aired, reaching a total of 28 million people (via TV and radio) in connection with the World AIDS Day (WAD). Another 6.7 million people were reached via TV for the World TB Day. The media campaigns were supported by community media outputs that included taxi branding and rank TV, with a reach of 4.3 million people. To support community activities, ACSM training was conducted for non-governmental organizations (NGOs) to capacitate them in developing ACSM strategies relative to the communities they serve.

Small grants: A total of 52 grantees under Wave 3 and 4. The grantees are engaged in a wide range of activities, including PPM activities, outreach to schools, support to c-PMDT, and ACSM. The grantees are linked to TB 183 facilities. Through the grants program, 193,463 community members were reached by TB/HIV messages, and 105,910 were screened for TB.

2.4 IR 4: Improved Management of TB Support Systems

The implementation of data verification exercises (DVE) in supported districts resulted in improvements in and identification of program challenges. ETR support followed by facility supportive supervision continues, with 497 facilities visited across all nine provinces. To improve the quality of the TB/HIV program, quarterly TB/HIV collaborative workshops were conducted.

2.5 IR 5: Tested New Approaches for Expanding DOTS Coverage

Activities for PPM in FY13 included strengthening TB services in mines, correctional services and private sector. The USAID TB Program strengthened public-public collaboration with the Departments of Transport and Labour. Trade unions were capacitated to provide adequate support to their members on TB and HIV management. The activities with traditional health practitioners (THP) were continued in Limpopo, while Durban University of Technology was funded to support Kwa Zulu Natal (KZN)..

3 INTRODUCTION

The USAID TB Program South Africa supports the National TB Control Program (NTP) strategies for improving early case detection, increasing access to diagnostics, ensuring treatment support for patient on TB treatment and ensuring that there is provision of appropriate and timely HIV care for TB patients and ART treatment for all TB/HIV co-infected patients. Overall, the USAID TB Program continues to develop its multi-level support working closely with:

- ***The NTP*** – to build national support by mobilizing resources and creating a conducive environment for expansion of TB services. This includes: TB/HIV and developing strategic interventions that could rapidly address MDR/XDR TB threats;
- ***Provincial and district health departments*** – to support the collaborative development of need based strategies to combat TB, TB/HIV and DR TB, as well as communities to create appropriate social mobilization and service delivery models for rapid directly observed treatment short-course (DOTS) expansion in the country.

The Project's technical and financial inputs will contribute to the following expected results:

→ Treatment success rate of 80%;

→ Improved capacity to plan and implement TB DOTS at community, facility, district, municipality, provincial and national levels;

→ Improved surveillance system resulting in early detection of TB cases, MDR TB cases, co-infected patients for ART as well as to prevent treatment defaulters and reduce mortality.

→ Improved understanding and support among the general population regarding TB and TB/HIV signs, symptoms, referral, and treatment.

The Project works to align its planned activities with the strategic policies of the SAG. These key strategic policies include the following:

- Health Sector 10 Point Plan, in which Point 7 specifically emphasizes accelerated implementation of the National Strategic Plan for HIV and AIDS, sexually transmitted infections (STI) and TB (HAST) 2012-2016 reduction of mortality due to TB;
- Decentralization of services to Primary Health Care (PHC) and nurse initiated diagnosis, treatment, and monitoring of HIV infected patients including management of TB/HIV co-infected patients. The criteria for initiation of ART for co-infected patients which changed to allow ART initiation for all co-infected patients.
- Revised National DR TB Control Policy: amendment addressing decentralization of DR TB care and community based management of DR TB;

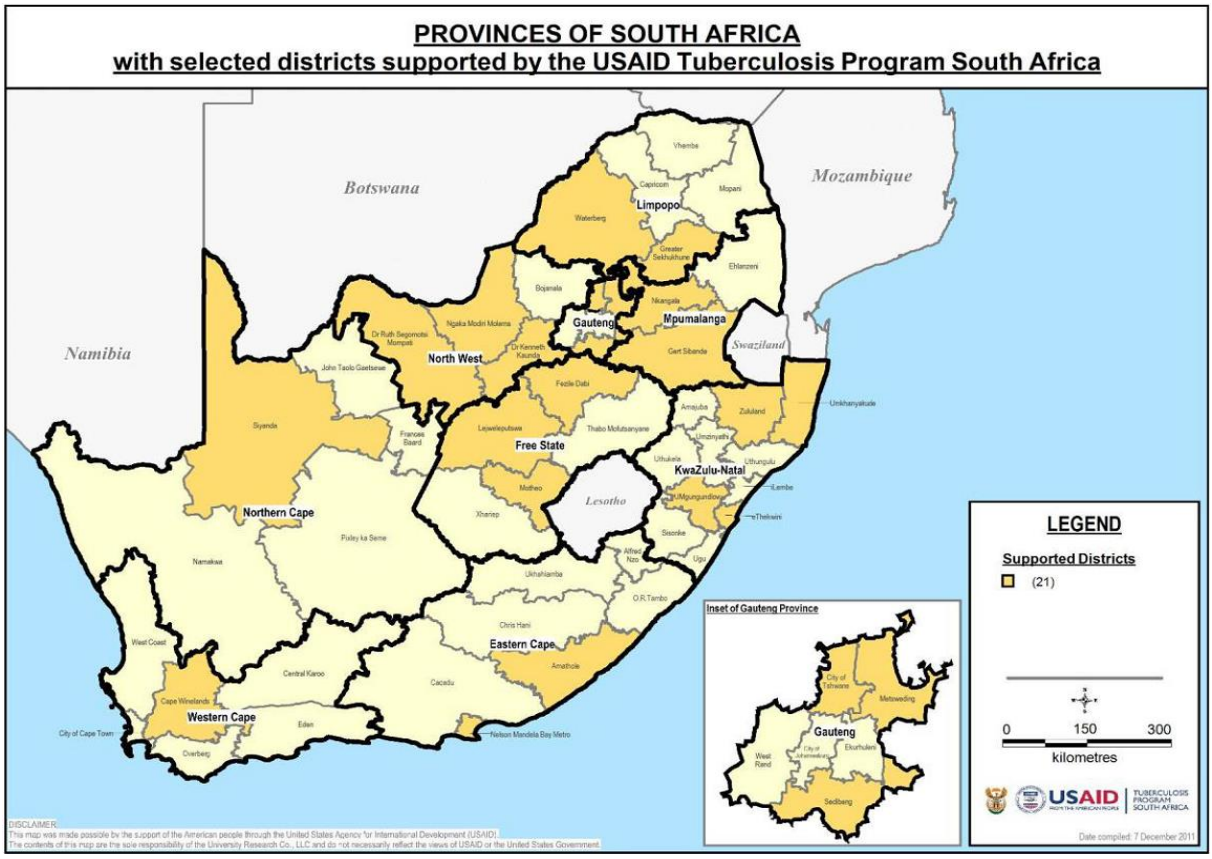
Activities in FY13 will be implemented in all the 24 supported districts. *See **Figure 1**: USAID TB Allocated District by Province on page 12*

4 Overall Project Performance

4.1 Performance by Geographic Coverage

The project geographical coverage represents 46% (24/52) of all the districts in the country as reflected in the map below.

Figure 1: USAID TB Allocated Districts by Province



4.2 Progress on USAID overall Targets

Progress on the key indicators is presented in Table 1 below. Major achievements in FY13 include development of Clinical DR TB training material, TB screening tool for THPs and the TB in Children job aid.

Table 1: Project Overall - Indicators progress summary, FY13

Indicator	Baseline	Target (FY13)	Achieved (FY13)
Number of improvements to laws, policies, regulations or guidelines related to improved access and use of health services drafted with USG support		2	**– Clinical DR TB training material** **– TB screening tool for THPs** **– TB in Children Job Aid**
Number of people trained in DOTS with USG funding		3500	**3829**

Number of TB cases reported to NTP by USG-assisted non-MoH sector		3500	**3529**
% of all registered TB patients who are tested for HIV through USG-supported programs		95%	**84.7%**
% of registered new smear positive pulmonary TB cases that were cured and completed treatment under DOTS (i.e. treatment success rate) in USG-supported areas	74%	80%	**78.8%**
SCR rates for new smear positive cases	63%	75%	**75.8%**
Cure rates for new smear positive cases	62%	75%	**71.8%**
Defaulter rates for new smear positive cases	8.3%	≤5%	**6.8%**

Development of tools

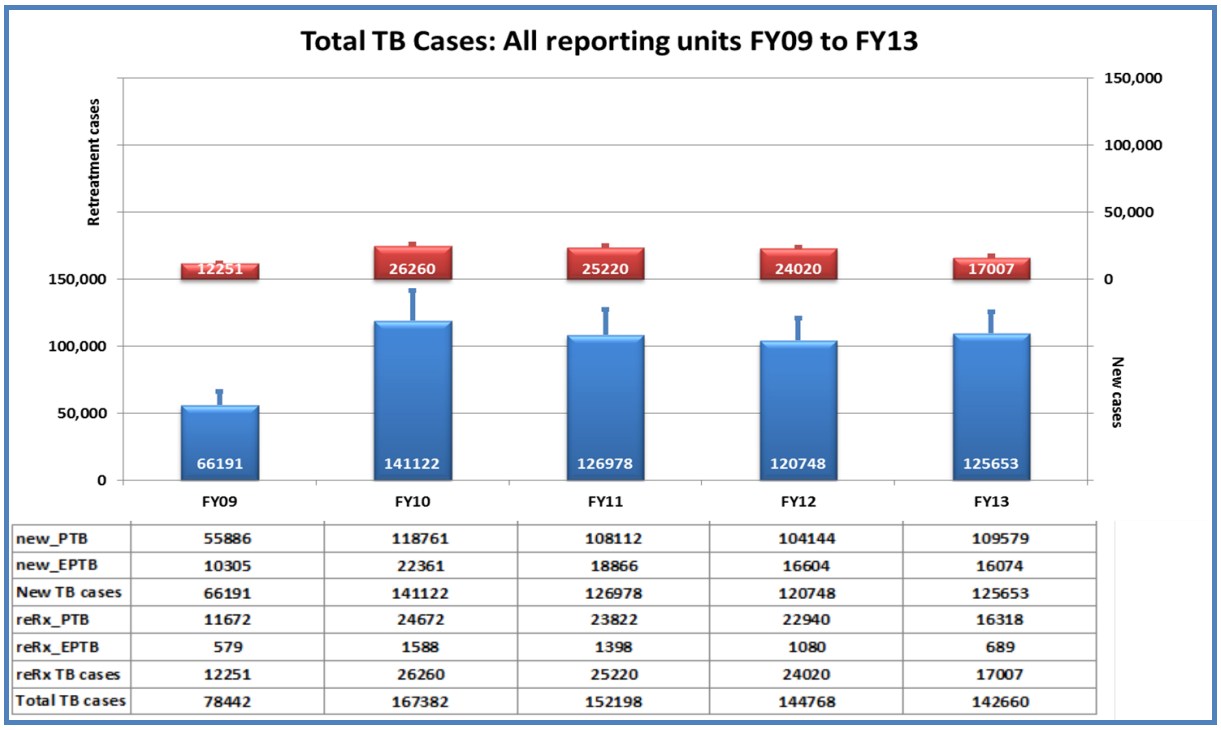
During FY13, the project continued to develop tools to support project implementation. A pictorial TB screening tool to support the integration of THPs was developed. This forms part of the intervention to improve management of TB patients in Greater Sekhukhune district. A job aid to support management of TB in children was developed and distributed.

A 'TB in children' baseline assessment tool was developed and implemented as part of evaluating TB in children in selected districts. The Clinical MDR TB training material was finalized and is being used for training.

TB Case Finding

A total of 142,660 TB cases were reported in the 24 supported districts in FY13; out of which 125,653 were new TB cases, and 17,007 were re-treatment TB cases. New pulmonary (PTB) cases accounted for 109,579 cases.

Figure 2: Total TB Cases by Site in all Districts- Jan 2009 - June 2013



	FY09	FY10	FY11	FY12	FY13
new_PTB	55886	118761	108112	104144	109579
new_EPTB	10305	22361	18866	16604	16074
New TB cases	66191	141122	126978	120748	125653
reRx_PTB	11672	24672	23822	22940	16318
reRx_EPTB	579	1588	1398	1080	689
reRx TB cases	12251	26260	25220	24020	17007
Total TB cases	78442	167382	152198	144768	142660

4.3 Performance by Intermediate Results

4.3.1 IR 1- Improved quality of TB services:

4.3.1.1 Collaboration with DOH and other stakeholders

A. National Meetings

i. Improvement of Data Quality Meeting

The USAID TB Program team was invited to discuss the improvement of data quality by the Chief TB Directorate. The key objective of the meeting was to discuss plans to improve the quality of data reported to National Department of Health (NDoH) on ETR.net. A key challenge identified was the poor recording and reporting of data collected from facilities. The outcome of the meeting was for Data Quality Verification teams to identify poorly performing sub-districts, identify actual facilities performing poorly and for on-site data verification to be conducted. The NDoH took the responsibility to inform all the remaining partners supporting the districts to also participate in the exercise. The USAID TB Program subsequently developed the standard operating procedures (SOP) to guide data verification exercises.

ii. TB/HIV Review meetings

The USAID TB Program participated in planning meetings for the internal South African Joint TB/HIV Review. The Senior TB/HIV Advisor was part of the planning committee, and was selected as the Project Manager for the activity. The review was commissioned by the Deputy Director General, Dr Yogan Pillay and was facilitated by the World Health Organization (WHO). The review is the first of its kind globally looking at TB, HIV and Maternal Health Programmes simultaneously. The committees formed included one on logistics, desk review, tool development and writing committees. Reviewers were selected from various developmental partners, including University Research Co.,LLC (URC). The outcomes of the review are expected to inform interventions and guide policy formulation.

iii. TB/HIV meeting

A TB/HIV meeting was held with the National TB/HIV Medical Officer and the TB/HIV Advisor from Clinton Health Access Initiatives (CHAI). The purpose of the meeting was to discuss challenges on the TB/HIV programme:

- Low IPT uptake
- Data quality on ART uptake
- Co-trimoxazole uptake
- TB screening for HIV clients

The national TB/HIV meeting for provincial managers which was agreed upon could not be conducted.

B. International Meetings

i. ILO Workshop on TB/HIV:

The USAID TB Program participated in a workshop led by the International Labour Organization (ILO) on strengthening the capacity of health planners, consultants and managers to develop and implement workplace policies and programmes on HIV/AIDS and TB. The workshop built on the previous decent work approach developed by the ILO which covers prevention and social protective issues. The objectives of the workshop included strengthening HIV and TB prevention, care and treatment in the world of work, applying social protection approaches to prevent HIV and TB and engaging the private sector.

ii. WHO Stop TB Partnership to the ninth meeting of the Subgroup on PPM for TB Care and Control:

The USAID TB Program participated in the ninth meeting of the Subgroup on PPM for TB Care and Control and Global Workshop on Engaging Large Hospitals held in Bangkok. The TB Program shared its experiences on using PPM for engaging the mining sector and traditional health practitioners in South Africa in the fight against TB. Global progress on PPM was discussed, including ways to accelerate PPM scale up and prepare for PPM mainstreaming within the post-2015 TB strategy. Future strategies to enhance attention to PPM before and beyond 2015 were discussed.

4.3.1.2 Support for DOTS expansion:

USAID TB Program support to the national GXP implementation and rollout

The activities conducted during FY13 comprise conducting impact evaluation of GXP implementation in Waterberg District, capacity building in the form of training at various levels, including training of trainers for USAID TB Program staff on diagnostics; monitoring of GXP in various Program-supported districts; supporting the implementation of the DR Survey; and targeted support visits to address specific challenges in the different districts.

Monitoring the impact of GXP in Waterberg as a project sentinel site

The USAID TB Program jointly with the Limpopo DoH monitored GXP implementation in Waterberg District to evaluate the impact of the tool on the TB program.

Baseline assessment and a monitoring tool were developed and used during the visits. Pre-GXP baseline assessments were conducted in 35 facilities. The key findings were as follows:

- ✓ GXP implementation in some laboratories already progressing well, with good TAT (Ellisras, Witpoort)
- ✓ Most facilities in the district have BC ≥90%
- × Long smear & GXP TAT (all Thabazimbi facilities, generally weak TB program.)
- × Incorrect recording of GXP results (misunderstanding by some sub-district TB coordinators)
- × Thabazimbi's GXP is *"too small"* hence sub-district TB coordinator & local laboratory management decided to do GXP for selected groups of patients (not for all suspects)
- × Poor TB/HIV in all facilities (screening & testing, linking of HCT & TB registers, IPT implementation)

Follow up visits to monitor progress were jointly conducted with the DoH. The following are key findings:

- ✓ GXP uptake had increased reaching 70% in Q1/2013 compared to 20% in Q4/2012
- ✓ BC declined from 84.9% in Q3/2012 to 72.8% in Q1/2013 in the ETR.net despite the full GXP coverage. This, however, did not correspond with the paper-based TB registers, which recorded 95% to 100% BC (results were for GXP and smear microscopy).
- ✓ TAT was long; 22 of the 29 (75%) of facilities had TAT lower than the 80% target; with 14/29 (48%) having TAT of <60%.
- ✓ Recording and reporting challenges:
    - Incorrect recording of GXP results, there was no indication in the register whether it was GXP or smear microscopy
    - Because the tool did not have a space for GXP recording, the culture section is being used
    - Lack of recording
- ✓ There was different understanding of treatment outcome for smear negative patients due to the definition in the 2009 TB management guidelines, which affects the treatment outcomes.

The challenges mentioned above affect GXP implementation in all the districts. Interventions planned and executed to address these include the following:

- ✓ Training of 20 URC trainers to scale up diagnostic training nationally

- ✓ Training for 617 HCWs nationally was conducted.
- ✓ NTP supported with printing of TB tools (*see IR3 on TB tool printed*)

Other targeted diagnostics support provided by the project

Matlosana Sub-district ETR.net support to investigate diagnostic challenges

Rationale and activity

DVE in Matlosana Sub-district in Northwest highlighted challenges related to GXP implementation, which affected the BC and management of TB patients. This necessitated a follow-up support visit to the ETR.net capturing point and 3 high case load facilities in the sub district.

Challenges identified:

- ✓ Decline in TB cases during the period Q3 2012.
- ✓ Decline in BC

The facilities analysed are Majara Sephapho Clinic, Grace Mokhomo Clinic and Gateway Clinic for Tshepong Hospital. Standardized data were collected using an adapted draft GXP implementation monitoring tool. A quick scan of the Klerksdorp Hospital was also done.

Finding:

- **Remarkably,** all GXP diagnosed patients at Klerksdorp Hospital did not have any baseline smears collected, which created a huge challenge for the sub-district as this hospital carries the biggest proportion of TB cases in the sub-district.
- Incorrect recording of GXP results in the paper registers as well as the incorrect capturing on the ETR.net.
  - GXP results recorded as "detected" instead of "positive",
  - RIF susceptibility was captured under the H (isoniazid) column, not R; or not indicated at all
  - GXP results are captured under smear results in ETR.net
- Collection of baseline smears well implemented (97%) in two facilities, and 25% in the other.
- High proportion of GXP positive smear negative patients, which could be related to high co-infection rate, or late collection of smears

Capacity building on TB diagnostics

Due to the high demand for diagnostic training nationally, the USAID TB Program trained 20 of its provincial coordinators as master trainers on diagnostics. This has yielded a positive impact, as training on diagnostics has increased. A total of 559 HCWs have been trained nationally.

4.3.1.3 Monitoring of diagnostic indicators

A. Bacteriological coverage (BC)

South Africa has advanced in the procurement of the GXP, with all provinces covered on GXP. Implementation of the GXP has impacted on the reporting of BC for the following reasons:

- TB tools were not updated at the time of GXP implementation, resulting in recording challenges;
- Similarly, the ETR.net was not updated to accommodate reporting of the BC;
- Implementation of the guidelines was not uniform; which resulted in the baseline smear collection not being done in some provinces.

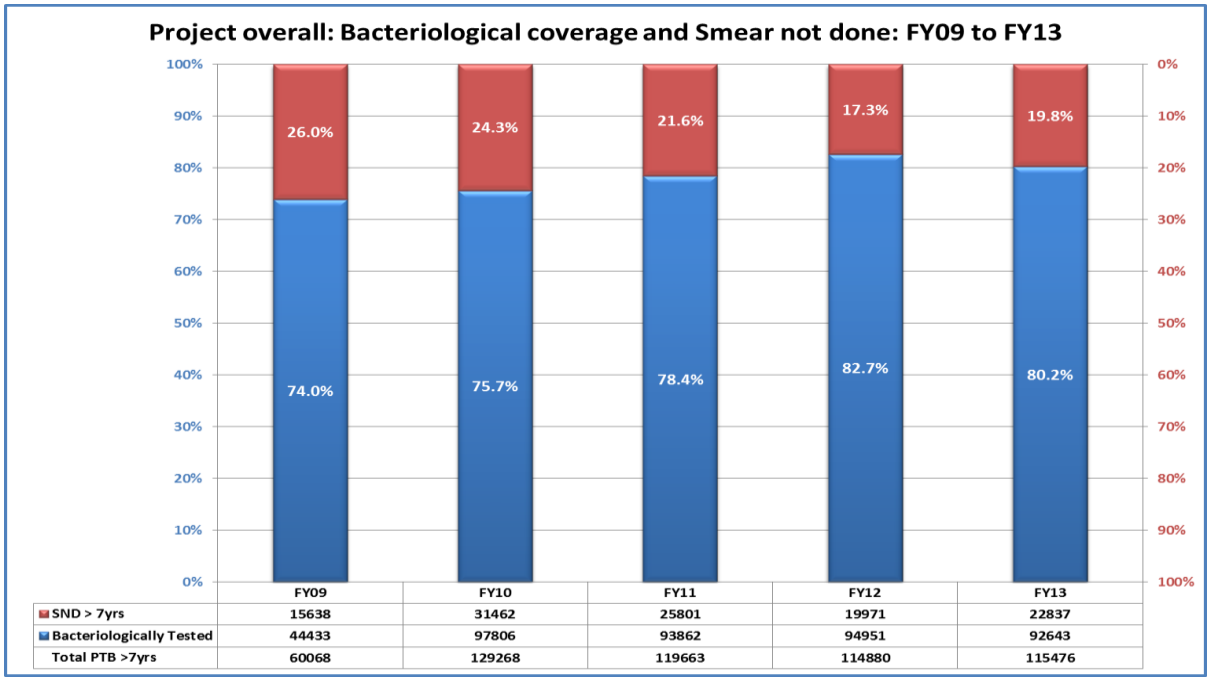
BC is an indicator that monitors compliance with National TB Guidelines on the use of sputum to diagnose TB, with the TB Program target of 90%. The TB Program achieved an overall BC of 80.2%, below the set target of 90% for FY13 and slightly lower than 82% reported in FY12. The TB Program believes most of the challenges will be addressed once TB tools have been updated and/or printed.

One of the worst affected provinces is Free State Province, where the BC dropped in all the districts. In EC, where BC is low, data verification was jointly conducted to identify the challenges, which were identified as:

- Smears collected but not recorded in the Case Identification and Follow-up Registers;
- Pre-treatment smear not collected at the hospitals;
- Lack of training of data capturers in NMBHD; and
- Poor reporting of smear results for GXP.

GXP training was conducted followed by facility supportive supervision to improve the BC. Slight improvements were observed in Mangaung, Fezile Dabi and Lejweleputswa (see ***Figure 4***). In Amathole and NMBHD, laboratory liaison officers and data capturers were trained on GXP, including recording.

Figure 3: Project overall - Bacteriological coverage and smear not done, FY09 to FY13

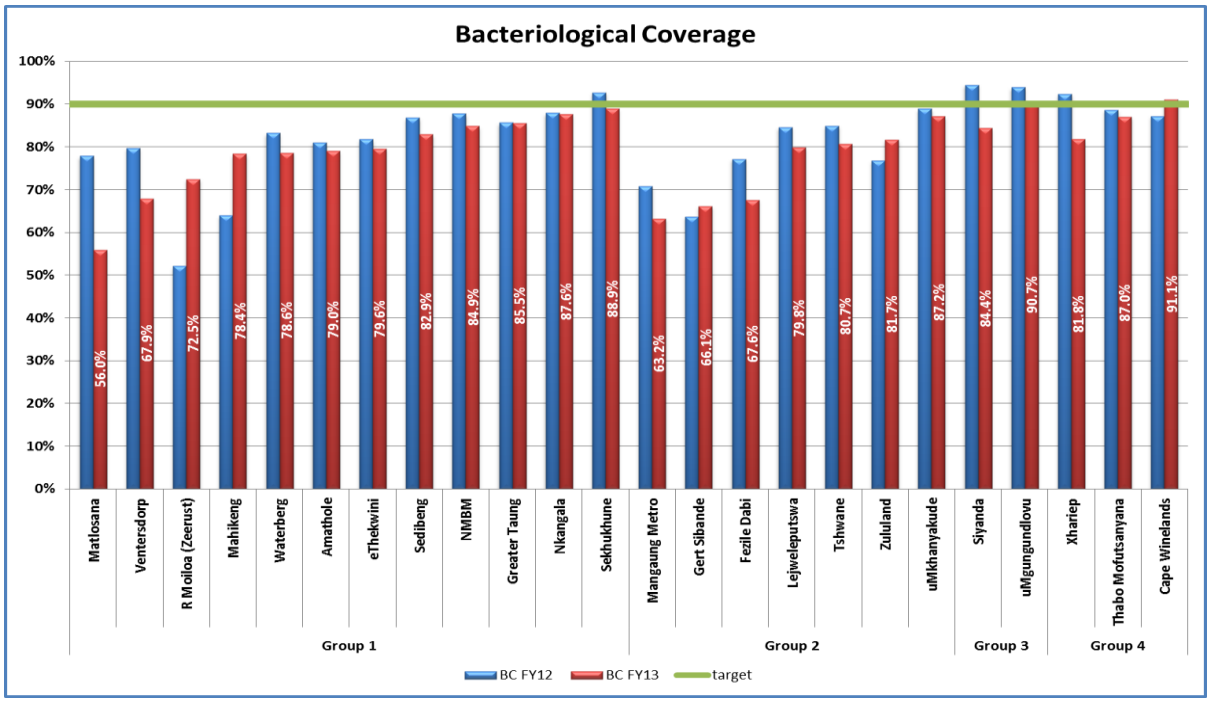


	FY09	FY10	FY11	FY12	FY13
SND > 7yrs	15638	31462	25801	19971	22837
Bacteriologically Tested	44433	97806	93862	94951	92643
Total PTB >7yrs	60068	129268	119663	114880	115476

In EThekwini and Zululand, hospitals and facilities which were identified as contributing to low BC were identified through ETR support and provided with support supervision to identify challenges and develop interventions.

Improving trends with BC >85% have been noted in Greater Sekhukhune, Nkangala, UMkhanyakude and Lejweleputswa. See ***Figure 4*** below:

Figure 4: Bacteriological coverage FY12 & FY13 - districts supported



B. Smear Conversion Rates

The target for SCR for new smear positive TB cases is 75% for FY13. The project has achieved target, reporting 75.8% in FY13, compared to 74.2% in FY12. By Q4/2013, 14 districts had achieved the 75% SCR target. For re-treatment cases, 64.0% of TB cases converted, compared to 62.7% in FY12. The project prioritized the following reporting units in FY13 to improve case holding, and thus improve treatment outcomes:

Limpopo: Waterberg, Greater Sekhukhune,

Mpumalanga: Nkangala, Gert Sibande;

Kwa-Zulu Natal: eThekwini, UMkhanyakude,

Free State: Mangaung;

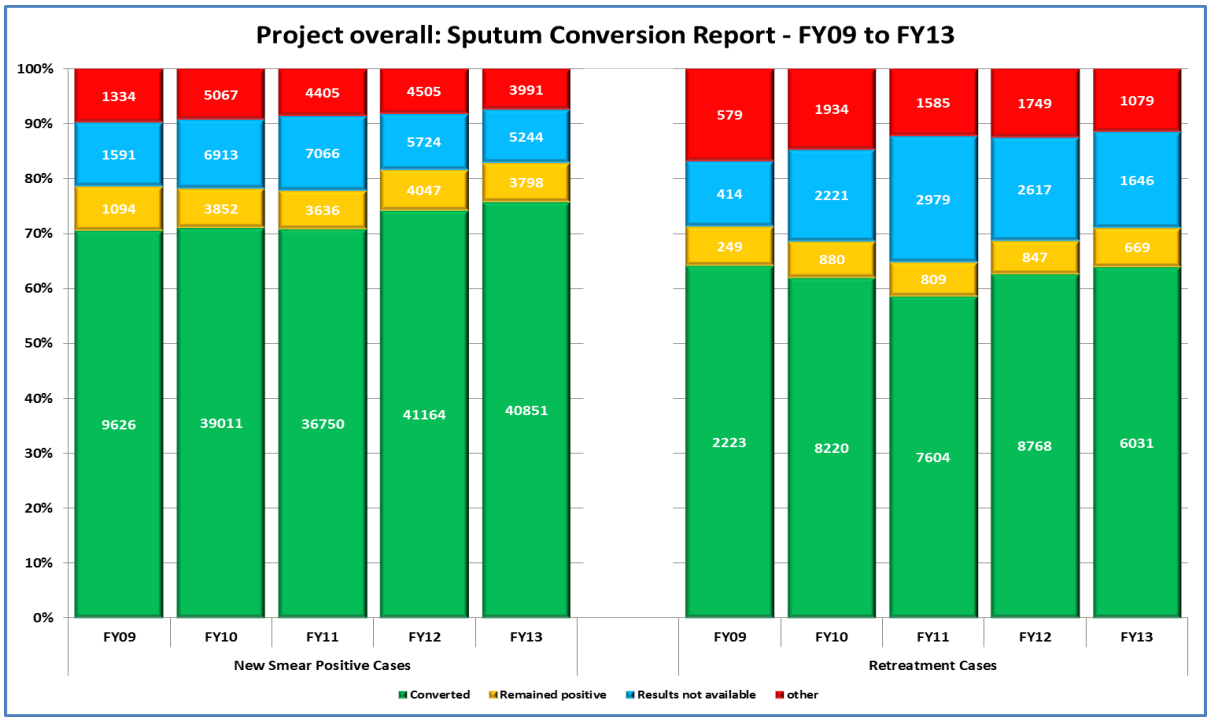
Eastern Cape: Amathole, NMBHD;

North West: Mahikeng, Ramotshere Moiloa and Matlosana.

Improving trends were noted in SCR in all the above districts except in Mahikeng and Ventersdorp Sub-districts.

Challenges involving SCR include late collection of smears, non-conversion at end of intensive phase, death and lack of DOT for patients.

Figure 5: Project Overall - Smear conversion FY09 to FY13



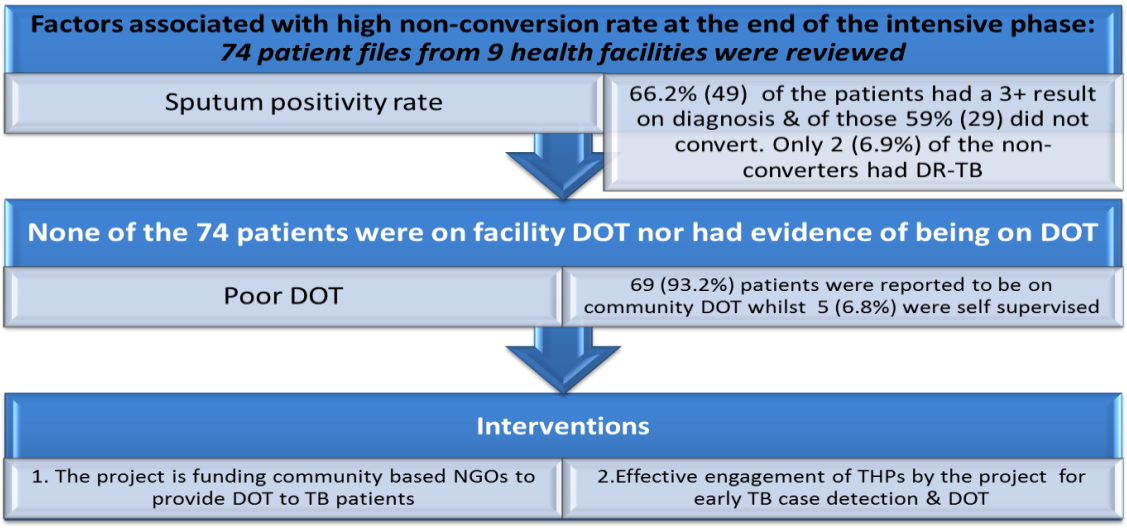
Interventions to improve SCR

1. ***Implementation of TB appointment diary:*** Following its development in FY12, the TB appointment diary was implemented to improve monitoring of TB patients and reduce/avoid loss to follow up. The diary was implemented in 56 facilities in 7 districts. In Waterberg and Greater Sekhukhune Districts, the USAID TB Program introduced the TB appointment diary to all PHC facilities. The diary was introduced to improve the timely collection of sputum from patients at the end of the intensive phase. The implementation of the TB appointment diary has shown improvements in districts with systems in place for patient follow-up.

2. ***Investigation to determine characteristics of non-converters:*** Greater Sekhukhune, Waterberg, Sedibeng and Nkangala Districts are some of the districts which reported high proportion of patients not converting at the end of intensive phase. An investigation to determine the characteristics of non-converters was conducted in Greater Sekhukhune.

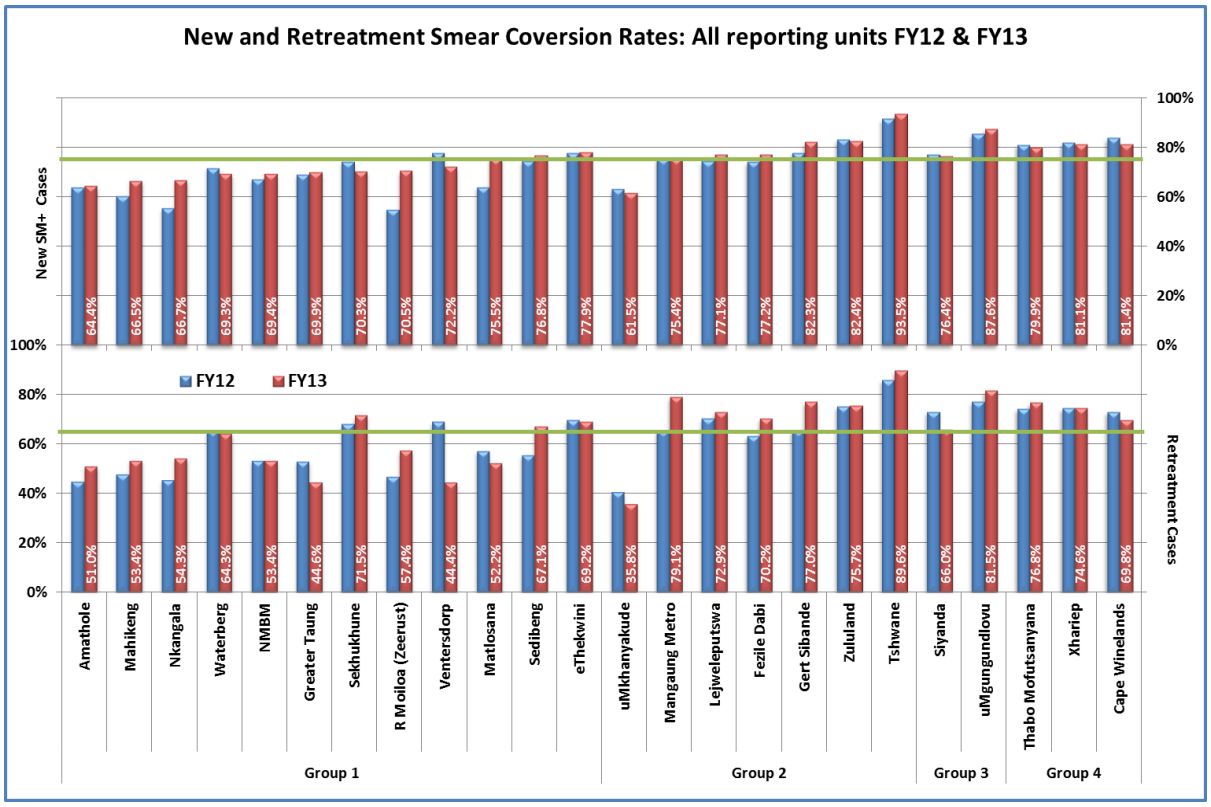
   Seventy four (74) patient files were reviewed from nine (9) health facilities with high rates of patients remaining positive at the end of the intensive phase. The results are illustrated in ***Figure 6.***

Figure 6: Greater Sekhukhune - Investigation on high non-conversion



3. ***Investigation of high mortality in Greater Sekhukhune:*** An investigation to determine the characteristics of death cases in Greater Sekhukhune District was conducted. A standardized questionnaire was used to collect data from the patients' folders and TB registers in facilities with high TB mortality. The mean time of death from treatment initiation was 34 days, with 58.6% of the 213 death cases happening within one month of starting TB treatment. Only 64% of the HIV positive patients (186) had CD4 count done; out of which only one had CD4 count greater than 350cells/ml. A total of 193 patients (80%) died in hospitals. This prompted an assumption that patients present late, given that most die within one month of treatment initiation and almost all had CD4 count less than 350c/ml. An intervention plan was jointly developed to address this key finding, including the involvement of THPs mentioned in IR5.

Figure 7: Smear conversion rates - reporting units, FY12 & FY13



4. ***Data Verification:*** The DVE led to significant improvements in the SCR in the two sub-districts in Mangaung and three sub-districts in NMBHD, where it was conducted; see ***Table 7.*** This intervention is discussed in detail under IR4.

4.3.1.4 Treatment Outcomes

Treatment outcomes are reported one year after the cohort has been initiated on TB treatment. This results in a lag period between interventions and realization of results. Improving trends have been noted in the last four quarters of FY13. Targets for FY13 are as follows: New SS+: cure rate 75%, TSR 80%, and lost-to-follow up rate less than 5%. Re-treatment: cure rates 65%, TSR 75%, lost-to-follow up rate <5%.

Improvements were noted in FY13; with TSR for new SS+ TB cases reaching 78.8%, just short of the 80% target from 77.1% in FY12. The project is approximating the target of 80% with a 79.8% TSR reported in Q4/2013. Twelve reporting units achieved the 80% TSR target for new SS+ TB cases in Q4/2013 compared to 7 reported in Q4/2012. For re-treatment TB cases, the TB Program has achieved 65.4% TSR, with ten of the 24 districts reaching the target of 65%.

The cure rate for new SS+ TB cases is still below target at 71.1%. Only ten districts have been able to achieve the target. The cure rate for re-treatment TB cases is lower, having reached 55.3% in FY13.

An intervention plan to improve TSR was developed in FY13 to address the identified challenges affecting TB treatment outcomes. These challenges included:

1. ***High TB mortality*** in Greater Sekhukhune, uMgungundlovu, Zululand Districts and Free State Province. Progress on these will be reported below.

   A study to determine the factors affecting high mortality in Free State Province was conducted in Free State province, involving 17,196 TB patients registered in 2010. Of the 2530 TB patients who died, 66% were HIV positive, while 25% did not have HIV status recorded. Factors associated with TB mortality included HIV status (Adj OR: 3.0); Unknown HIV status (Adj OR: 2.03); started on ART (Adj. OR: 0.55); smear positive (Adj. OR: 0.77); age >65 (Adj. OR: 16.70). An intervention plan which includes improving HIV testing for TB patients and improving ART uptake has been developed and will be monitored in FY14.

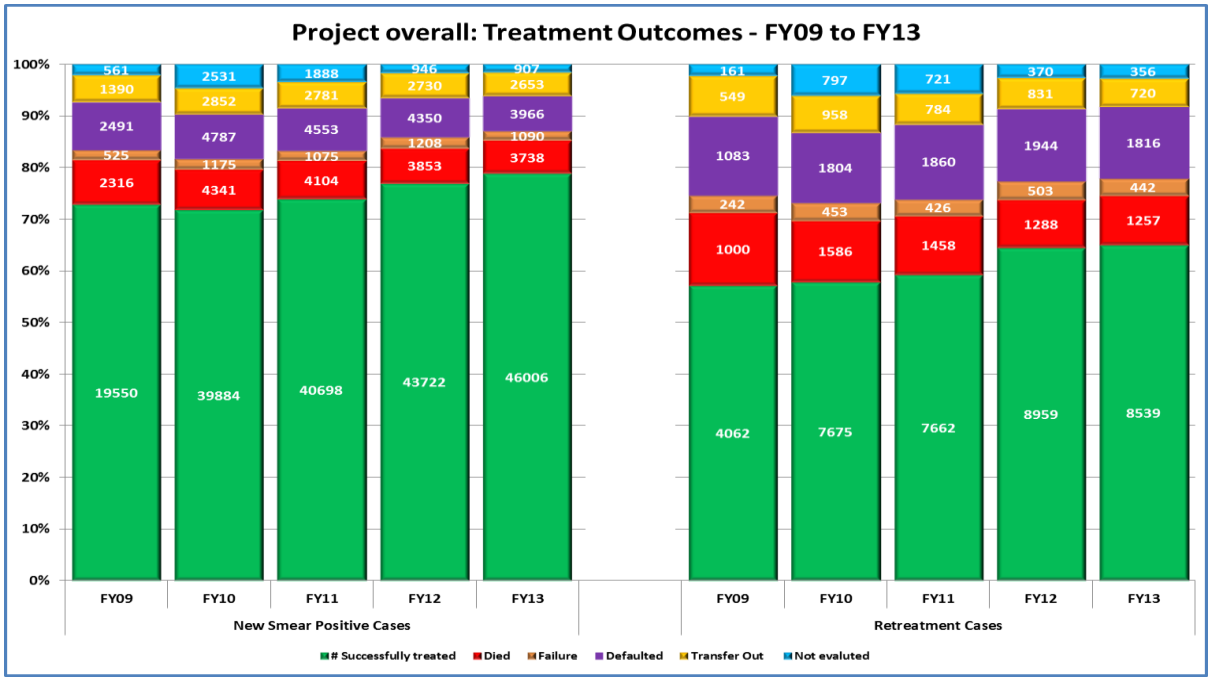
2. ***Late presentation of TB patients***: A number of activities were implemented to improve the late presentation of patients. These included providing education and information material to improve knowledge on TB and TB/HIV, addressing stigma through community dialogues, and involving THPs. Training of HCWs on TB and TB/HIV management was also conducted. Activities on ACSM are addressed in IR 3.

3. ***Poor data quality:*** The DVE was introduced in FY13 with the aim of improving data quality. Improvements have been noted in the districts where the activity was conducted. At least 10 districts undertook this activity.

4. ***High loss to follow up of TB patients***: Reporting units with high lost-to-follow up rate include eThekwini, Amathole, NMBHD, Nkangala, Mahikeng, Mangaung, Waterberg and Cape Winelands. Efforts to address this challenge involved engaging local NGOs in the same areas to provide ACSM activities, provide treatment support, trace contacts and follow up patients in the communities. The NGOs are linked to facilities with high caseloads to improve patients'

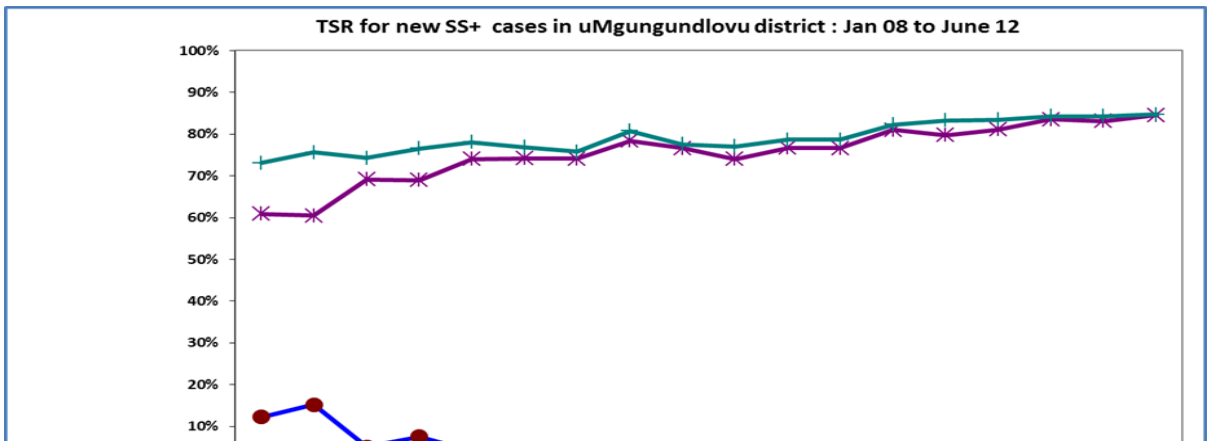
treatment outcomes. These NGOs were capacitated on the management of TB and TB/HIV. More detail is provided under IR3.

Figure 8: Project overall - Treatment outcomes, FY09 to FY13



Kwa-Zulu Natal Province carries the highest TB burden in South Africa, accounting for 30% of all TB cases reported. The TB Program supports four districts in KZN and they all have shown marked improvements; having achieved the 80% target for TSR. UMgungundlovu District has achieved all the targets set, including the TSR, having achieved 84.7% in Q4/2013.

Figure 9: TSR for new SS+ cases for uMgungundlovu District, FY09 to FY13

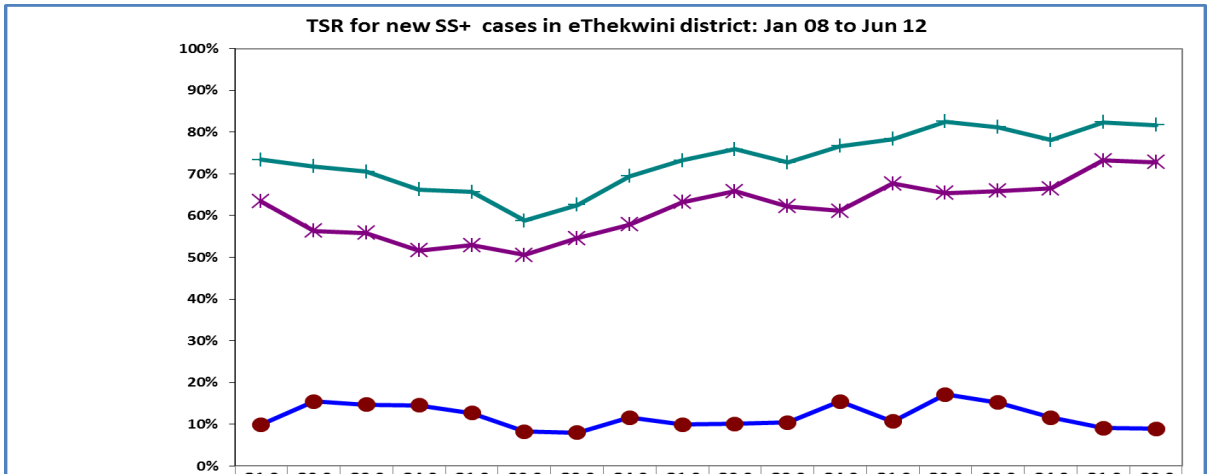


	Q1:2008	Q2:2008	Q3:2008	Q4:2008	Q1:2009	Q2:2009	Q3:2009	Q4:2009	Q1:2010	Q2:2010	Q3:2010	Q4:2010	Q1:2011	Q2:2011	Q3:2011	Q4:2011	Q1:2012	Q2:2012
New SS+ Cases	777	665	704	648	634	632	727	783	838	619	645	745	790	567	723	642	693	661
Cured	473	402	487	447	469	469	539	614	642	458	495	571	640	452	586	536	576	559
Completed	95	101	36	49	26	17	12	18	8	19	12	15	10	20	17	5	8	1
# Successfully treated	568	503	523	496	495	486	551	632	650	477	507	586	650	472	603	541	584	560
Cure Rate (%)	60.9%	60.5%	69.2%	69.0%	74.0%	74.2%	74.1%	78.4%	76.6%	74.0%	76.7%	76.6%	81.0%	79.7%	81.1%	83.5%	83.1%	84.6%
Completion Rate(%)	12.2%	15.2%	5.1%	7.6%	4.1%	2.7%	1.7%	2.3%	1.0%	3.1%	1.9%	2.0%	1.3%	3.5%	2.4%	0.8%	1.2%	0.2%
Rx success Rate (%)	73.1%	75.6%	74.3%	76.5%	78.1%	76.9%	75.8%	80.7%	77.6%	77.1%	78.6%	78.7%	82.3%	83.2%	83.4%	84.3%	84.3%	84.7%

EThekwini District also deserves special mention, as it reports the highest TB cases in South Africa. TSR for eThekwini has improved from 65.6% in Q1/2009 to 82% in Q2/2012. UMkhanyakude District reported as facing data challenges in the last two years, however, following the introduction of the DVE, consistent improvements have been noted. The TSR has gradually improved in the past four quarters from 73% in Q2/2011 to 83.6% in Q2/2012.

Improvements in these districts are attributable to the interventions developed jointly using the TB/HIV Collaborative Model of PDSA. The model includes: conducting baseline assessments which inform quality improvement (QI) plans, which are jointly monitored, training on QI and TB and TB/HIV management, and quarterly monitoring and evaluation of activity implementation.

Figure 10: TSR for new SS+ cases for eThekwini District, FY09 to FY13



	Q1:2008	Q2:2008	Q3:2008	Q4:2008	Q1:2009	Q2:2009	Q3:2009	Q4:2009	Q1:2010	Q2:2010	Q3:2010	Q4:2010	Q1:2011	Q2:2011	Q3:2011	Q4:2011	Q1:2012	Q2:2012
New SS+ Cases	2897	3172	3211	3051	3344	3284	3544	2612	2318	2596	2728	2868	3293	3066	3410	3375	3245	2967
Cured	1837	1786	1793	1576	1769	1659	1933	1510	1465	1708	1697	1753	2228	2005	2248	2243	2376	2160
Completed	288	492	472	444	426	271	284	303	231	263	286	444	352	526	519	392	295	264
# Successfully treated	2125	2278	2265	2020	2195	1930	2217	1813	1696	1971	1983	2197	2580	2531	2767	2635	2671	2424
Cure Rate (%)	63.4%	56.3%	55.8%	51.7%	52.9%	50.5%	54.5%	57.8%	63.2%	65.8%	62.2%	61.1%	67.7%	65.4%	65.9%	66.5%	73.2%	72.8%
Completion Rate(%)	9.9%	15.5%	14.7%	14.6%	12.7%	8.3%	8.0%	11.6%	10.0%	10.1%	10.5%	15.5%	10.7%	17.2%	15.2%	11.6%	9.1%	8.9%
Rx success Rate (%)	73.4%	71.8%	70.5%	66.2%	65.6%	58.8%	62.6%	69.4%	73.2%	75.9%	72.7%	76.6%	78.3%	82.6%	81.1%	78.1%	82.3%	81.7%

In ***Mpumalanga Province,*** Gert Sibande has shown improvement, with TSR improving from 69.8% in Q1/2009 to 83.1% in Q2/2012. Despite the type of support provided to Nkangala District, challenges in achieving the target remain. Four of the sub-district in Nkangala do not have data capturers, and rely on the TB coordinator to capture the data. This results in delays in capturing, data backlogs and poor quality of program supervision. In an attempt to support the M&E function; two data capturers were temporarily employed in the district. The district will be monitored for improvements.

Loss to follow up (Defaulter Rates)

The target for lost-to-follow up rate for new SS+ and re-treatment TB cases for FY13 is <5%. The lost-to-follow up rate has dropped over the years from 9.3% in FY09 to 6.8% in FY13, 1.8% more than the target. Only 10 districts have lost-to-follow up rate <5%; of concern are NMBHD and Amathole Districts still reporting lost-to-follow up rate >10%. Reporting units that have shown improvements are Nkangala, Mangaung, Xhariep, Sedibeng Districts and Ventersdorp Sub-district.

In Cape Winelands, four local NGOs were funded. They field a total 94 community care workers (CCW). The NGOs support specific sub-districts, and are linked to 26 high case load facilities out of

the 47 district facilities. The NGOs activities include contact tracing, follow-up of child contacts, intensified case finding, providing treatment support and tracing lost-to-follow up cases. The need to train CCWs and the district Community Based Services (CBS) unit was identified and training conducted for 65 CCW in the district. The CBS will be trained in Q1/2014. Linkages were provided to facilities to ensure that the continuum of care is maintained. The NGO reports and data are, however, not captured as part of the facility report, a challenge which is being addressed by the district.

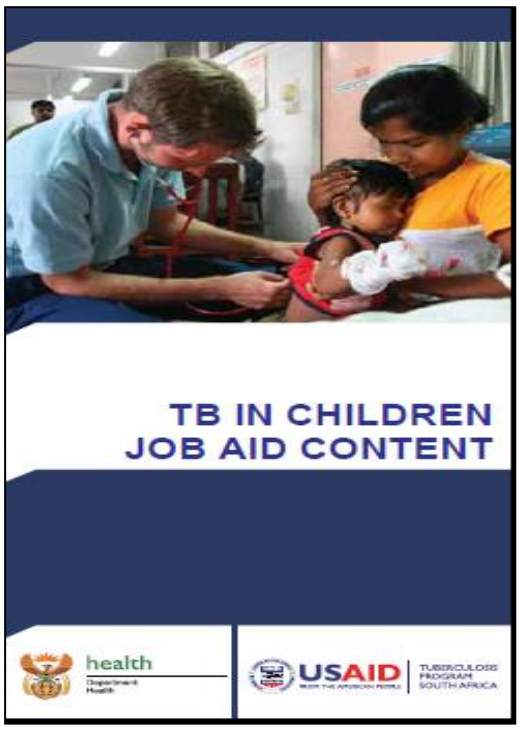
Addressing TB in Children

Management of TB in children has been highlighted as a priority for the SAG. To address the challenges identified, the TB Program activities focused on increasing awareness for TB in children, involving NGOs to trace child contacts and conducting baseline assessments to assess the current practices of childhood TB management at the different levels of service delivery. Findings from the baseline assessment revealed the following:

- Lack of demand for the service;
- Weak child contact tracing and evaluation systems;
- Limited clinical management skills of health care workers;
- Diagnostic difficulties; and
- Provision of IPT for under five is in place.

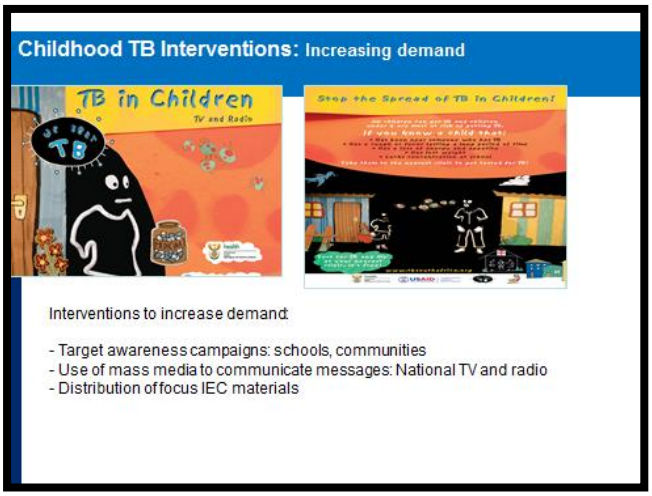
Childhood TB Interventions to increase the demand for services

1. The project developed tools to support the management of childhood TB. A TB in children job aid and the South Africa Childhood TB report card were developed. The image below show the job aid HCW developed to improve knowledge on TB in children.



2. The USAID TB Program used the ACSM strategy to raise awareness on TB in children through different means.

3. Funding was provided to NGOs to support activities on TB in children:



4.3.2 IR 2 - Increased availability of TB services

4.3.2.1 Capacity Building

The focus for FY13 was to train HCW on Basic TB, TB/HIV and clinical MDR TB management. To ensure sustainability and incorporation of basic TB in the training curriculum for nurses and doctors, the TB Program had planned to fund Democratic Nursing Organisation of South Africa (DENOSA) to train nurse educators. Training of master trainers for clinical MDR TB continued in FY13.

In FY13 the TB Program trained 3,829 HCWs, achieving the set target of 3,500, with a further 2,124 (target-2,000) trained on TB/HIV and 1,009 (target-1,000) on IC. As part of the training, the need to train more HCW on diagnostics continued as South Africa continued to scale up GXP coverage, with 617 HCWs trained. Further training on diagnostics was on the DR Survey, which continued in FY13 in Western Cape and Free State. This is part of the support to the National DR Survey which started in 2012. The survey is anticipated to end in 2013 (FY14).

As part of developing local capacity, the training of master trainers for Clinical MDR TB jointly with the IUATLD continued in FY13. Six additional trainers were certified, bringing the total of master trainers to 20, covering all 9 provinces. Subsequently, the master trainers trained 194 HCWs in all provinces, except Western Cape.

A similar approach to train master trainers was initiated for the Strengthening TB/HIV Collaborative Activities which is jointly conducted with the IUATLD. Three master trainers were identified for further mentoring in FY14.

In FY13, the workshop for Strengthening TB/HIV Collaborative Activities focused on training 22 managers in the Department of Correctional Services (DCS) in line with pronouncement by the Minister of Health during the World TB Day 2013, to train DCS on the newly launched guidelines on management of TB, HIV and STI in correctional services. The attendees developed an action plan which will be monitored jointly with the DoH and DCS.

Table 2: Trainings conducted in FY13

Numbers for PEPFAR			**Numbers for USAID (TraiNet)**		
Indicator	**Target**	**Reached**	**Indicator**	**Target**	**Reached**
Number of HCWs trained on TB IPC	1000	1009	Number of people trained in DOTS using USG funds	3500	3829
Number of HCWs trained on TBHIV	2000	2124			
ACSM	1000	1604			
TOTAL	**4000**	**4737**	**TOTAL**	**3500**	**3829**

Source: USAID TB Database

DENOSA was awarded a grant to train nurse educator in all 9 provinces in South Africa. The objectives of the grant was to ensure that nurse educators are capacitated to provide the necessary TB training to support their colleges, and incorporate TB training in the curriculum. The target for FY13 was to train 200 nurse educators; however, only 182 were reached due to unavailability of nurse educators in some of the provinces. The pre-training test results of the training indicate the low level

of basic TB knowledge among nurse educator in all the provinces, which improved after the training. Of the 179 nurse educators who participated in the pre-training and post-training tests, the median mark for pre- training test was between 50-59% while the post-training test indicates a median mark between 80-89%. A total of 75 out of 179 participants obtained marks below 50% and only four obtained marks above 80% while in the post-training test none of the participants obtained a mark below 50% and 99 (55.3%) obtained marks above 80% respectively, with 10 actually totalizing in the post-training test. This highlights the need to scale up TB training for nurse educators beyond the 182 trained.

To support implementation of TB and TB/HIV services through PPM, TB and TB/HIV training was extended to private sector through funding of some NGOs. The training targets managers, peer educators and HCWs in workplaces. A total of 550 managers and peer educators have been trained on TB/HIV in FY13 through the grantees.

4.3.2.2 TB/HIV Integration

TB/HIV Integration

Development of guidelines and tools

The USAID TB project provided technical expertise to the NTCP during the review of the IPT guidelines. These guidelines were updated in accordance to the emerging evidence on the effectiveness of IPT in HIV positive individuals. A total of 4000 copies of the TB screening tool were printed and distributed to facilities in all 9 provinces, to improve the screening of HIV positive clients for TB.

A. *Improve mechanism of TB/HIV collaboration:*

In FY13 the USAID TB Program jointly conducted the workshop on "Strengthening TB/HIV Collaborative Activities" with NTCP and IUATLD. The focus was DCS managers, who were prioritized following the pronouncement by the Minister of Health in March 2013 during the World TB Day. Quarterly HAST meetings have been conducted in the all the supported districts/provinces. The meetings focused on joint planning for the HIV and TB programs, monitoring progress and designing interventions.

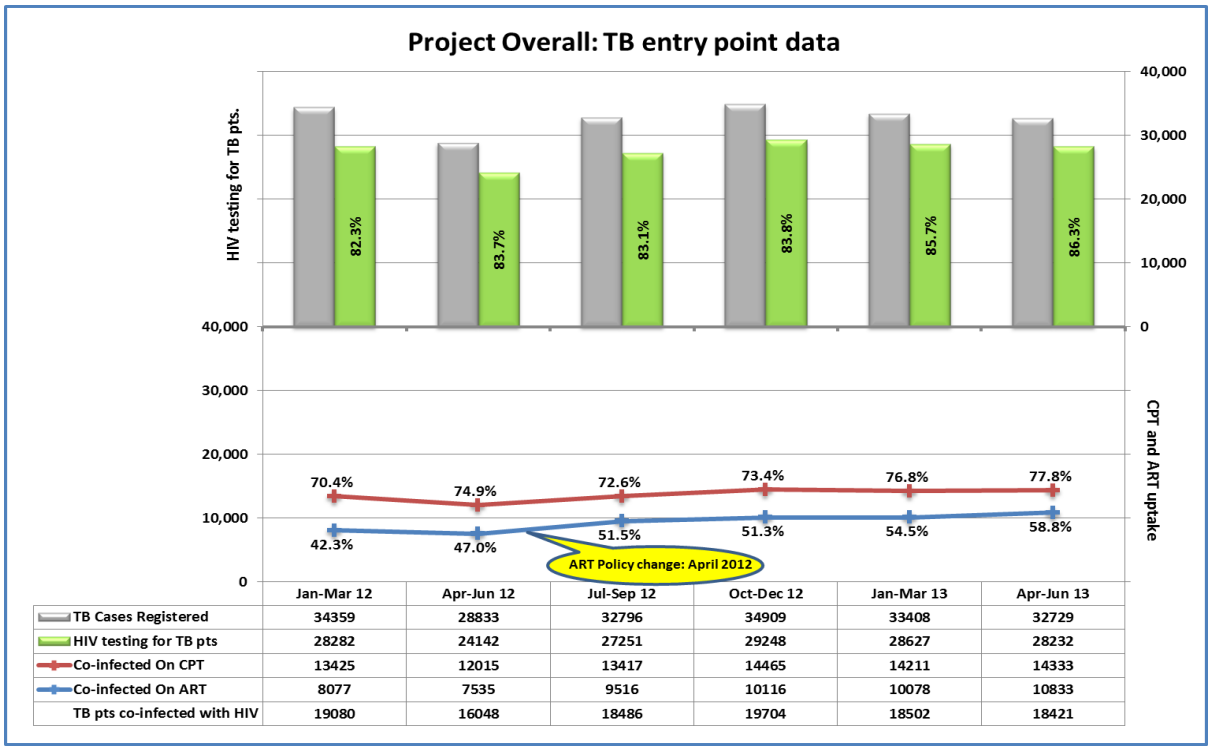
The USAID TB Program team participated in the final review and orientation of HCWs on the revised 2013 HIV treatment guidelines. The orientation in March 2013 included updating of HCWs on the guideline changes, informing all of the new Fixed Dose Combination (FDC) ART now available in the public sector and implementation plans for rollout of the new FDC drugs. As per the NDoH all ART naïve clients eligible for ART would be initiated on the FDC drug – 1 tablet per day. The FDC combines TDF/FTC/EFV in a single tablet.

B. *Decrease the burden of HIV among TB clients:*

A total of 133,842 TB patients were registered in FY13, out of which 113,358 (85.7%) tested for HIV, a slight improvement compared to the 83.7% reported in the April-June 2012, the last quarter of FY12. Fourteen districts achieved the 90% target, compared to the seven reported in the Q2/2013; with only one reporting less than 80%. Co-trimoxazole prophylaxis (CPT), which is an important intervention to reduce morbidity and mortality, was provided for 75% of the 75,113 TB/HIV co-infected patients. Improvements have been noted, with ten districts having achieved 90% target for initiating co-infected patients on CPT compared to six districts reported in Q3/2013. Data verification has been conducted in eThekwini and uMkhanyakude; findings revealing that capturing in the ETR

was a challenge as patients were on CPT according to paper-based registers. CPT stock outs reported in North West province have been addressed.

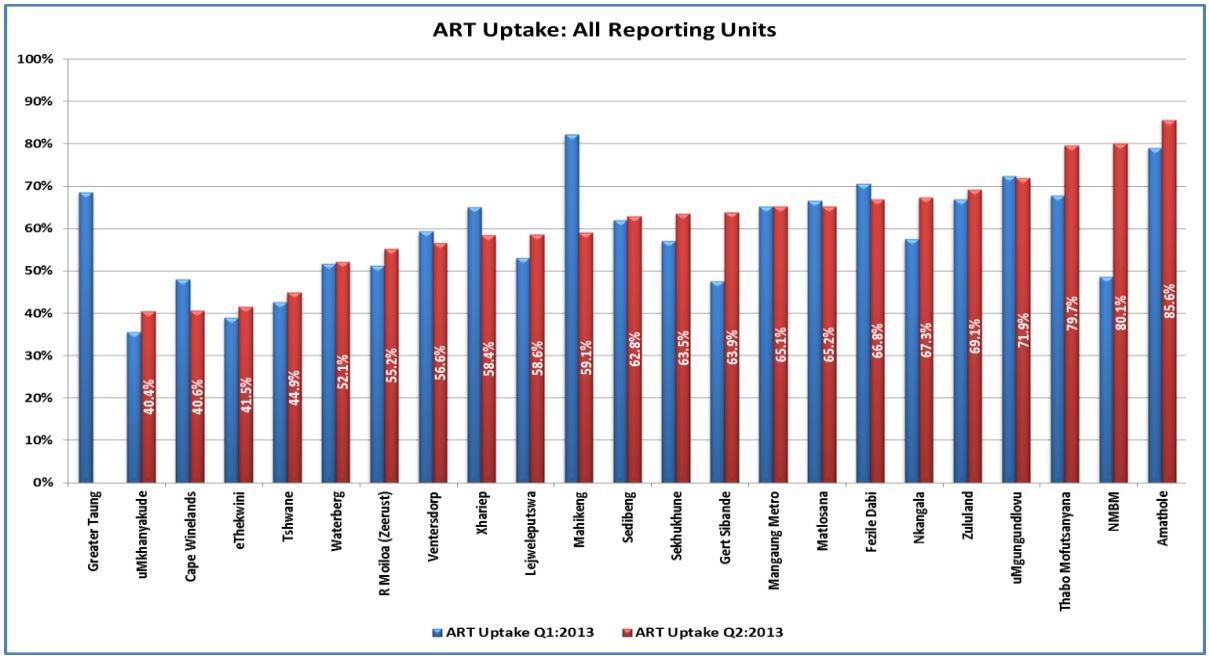
Figure 11: Project overall: TB entry point, Q3/2012 to Q4//2013



	Jan-Mar 12	Apr-Jun 12	Jul-Sep 12	Oct-Dec 12	Jan-Mar 13	Apr-Jun 13
TB Cases Registered	34359	28833	32796	34909	33408	32729
HIV testing for TB pts	28282	24142	27251	29248	28627	28232
Co-infected On CPT	13425	12015	13417	14465	14211	14333
Co-infected On ART	8077	7535	9516	10116	10078	10833
TB pts co-infected with HIV	19080	16048	18486	19704	18502	18421

ART Uptake: The uptake of ART amongst TB/HIV co-infected patients gradually improved during FY13. However, more still needs to be done to ensure that TB/HIV co-infected patients have access to quality care to improve the morbidity and mortality. There was an improvement of 10% in the ART uptake in Q4/2013 compared to Q4/2012. This has been positively influenced by the implementation of the policy change in 2012, allowing all co-infected patients to be initiated on ART regardless the CD4 count. Twelve districts have at least 60% of the TB/HIV co-infected patients on ART. In some of the districts, marked improvements have been achieved following targeted interventions.

Figure 12: ART uptake for reporting units, Q1/2013 & Q2/2013

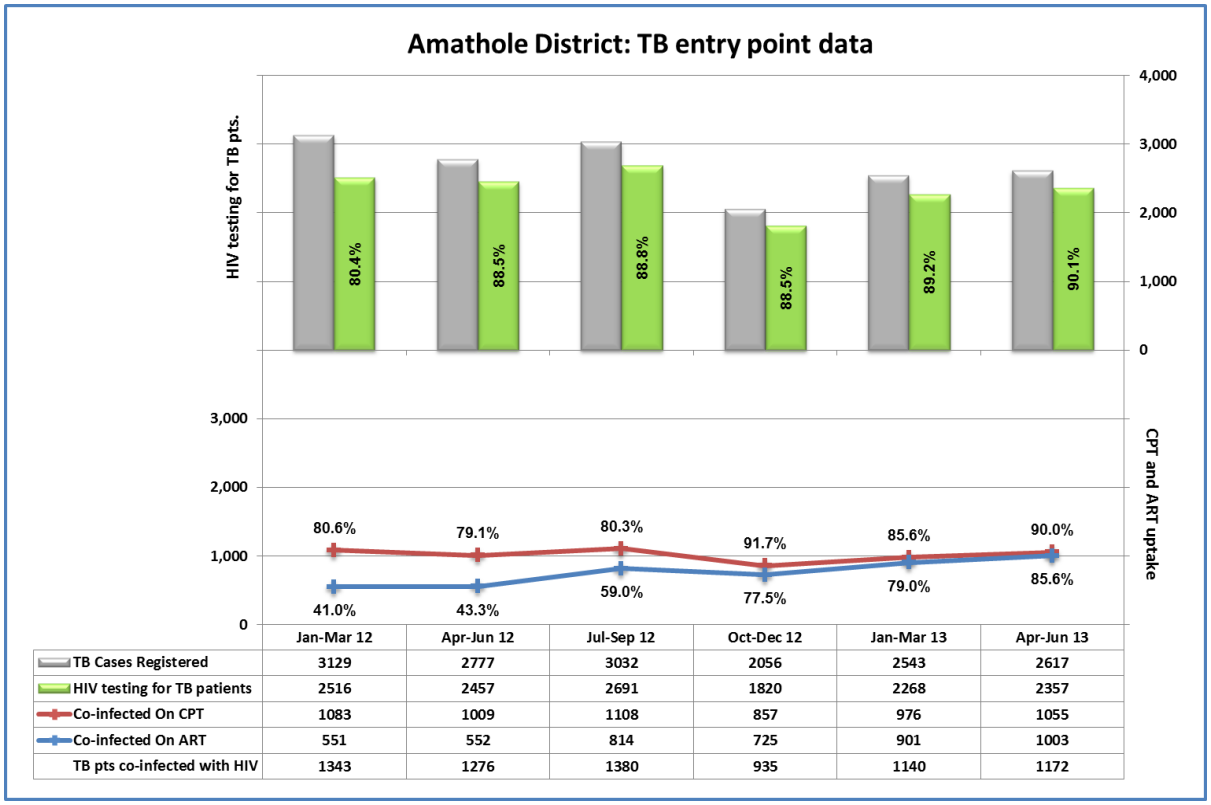


Four districts have continued to report ART uptake of less than 50% for co-infected patients, Cape Winelands, eThekwini, uMkhanyakude and Tshwane. Reports for facilities with high caseloads and low ART uptake were identified in eThekwini and uMkhanyakude for intense support. Registers and patients folders were reviewed and compared to the ETR reports. Findings indicate that reporting was the reason for the low ART uptake. Updates are being captured and progress will be in the next report.

Data verification, on-site training, coaching and mentoring were conducted in NMBHD, resulting in improvements in the ART uptake for co-infected patients, from 48.6% in April-June 2012 to 80.1% April-June 2013.

In Amathole District, joint planning meetings to discuss TB/HIV integration to improve outcomes were initiated in October 2012, when the ART uptake for co-infected patients was 43.3% for April to June 2012. Training of HCWs on NIMART, mentoring, facility support visits to poor performing high caseload facilities and data verification assisted in the improvements noted. *Refer to **Figure 13** below.*

Figure 13: TB entry point for Amathole District, Q3/2012 to Q4/2013



	Jan-Mar 12	Apr-Jun 12	Jul-Sep 12	Oct-Dec 12	Jan-Mar 13	Apr-Jun 13
TB Cases Registered	3129	2777	3032	2056	2543	2617
HIV testing for TB patients	2516	2457	2691	1820	2268	2357
Co-infected On CPT	1083	1009	1108	857	976	1055
Co-infected On ART	551	552	814	725	901	1003
TB pts co-infected with HIV	1343	1276	1380	935	1140	1172

C. Decrease the burden of TB in HIV clients:

Intensified Case Finding: Four thousand copies of the TB screening tool were printed and distributed to provinces in FY13. Distribution was also extended to DCS in response to a need identified during training. Monitoring of the implementation of the TB screening tool continue to be used in supported districts. A total of 375,606 HIV clients accessed HIV related care in FY13 (***Figure 14***), out of which 366,373 (97.5%) were screened for TB.

Support IPT implementation:

The USAID TB Program participated in the review of the IPT guidelines, which led to the following suggested changes:

Table 3: IPT guidelines changes

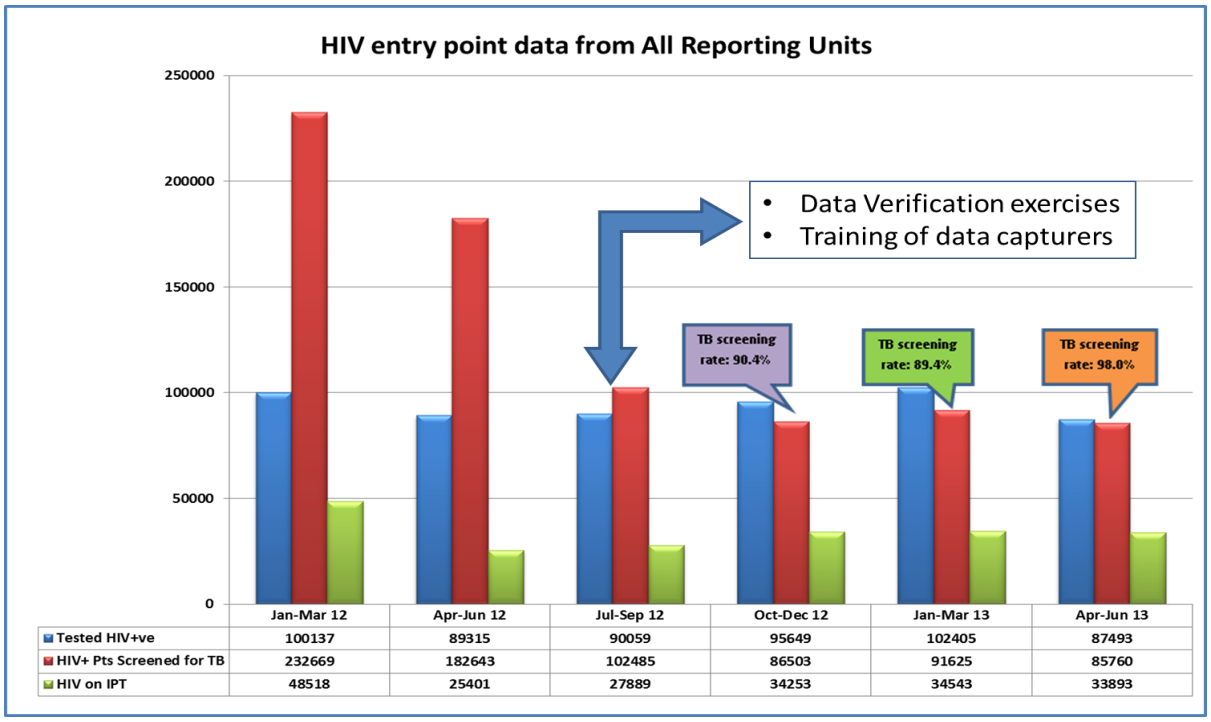
	PLHIV not eligible for ART	PLHIV on ART

TST negative	IPT optional (benefit limited)	IPT for 12 months
TST positive	IPT for at least 36 months	IPT for at least 36 months
TST not done*	IPT for 6 months	IPT for 12 months

The guideline review process is still on-going. The above recommendations are being implemented differently in the different provinces. The IPT register is being monitored in the supported districts.

During FY13, 130,578 HIV clients who were not presumptive TB following symptomatic TB screening were initiated on IPT. Implementation of the new guidelines has started in some of the districts, with requests to print IPT registers that incorporate the changes. The TB Program is currently adapting the changes in the IPT registers for printing.

Figure 14: HIV entry point, Q3/2012 to Q4/2013



	Jan-Mar 12	Apr-Jun 12	Jul-Sep 12	Oct-Dec 12	Jan-Mar 13	Apr-Jun 13
Tested HIV+ve	100137	89315	90059	95649	102405	87493
HIV+ Pts Screened for TB	232669	182643	102485	86503	91625	85760
HIV on IPT	48518	25401	27889	34253	34543	33893

Infection control

The USAID TB Program continued to provide technical assistance (TA) to the districts and facilities to implement IC guidelines. As part of that support, training on IC guidelines was conducted for 1,009 HCWs in FY13, achieving the set target of 1,000. TB IC risk assessments were conducted for the first time in 146 facilities, 91 follow-up assessments were conducted. Following the risk assessments, 39 facilities were assisted to develop TB IC plans.

Key challenges identified include;

- Non-integration of TB IC into overall IC activities at facility, district and provincial level;
- Poor monitoring of TB IC activities at District and Provincial level;
- Limitations of existing infrastructure to support effective implementation of TB IC in supported districts; and
- IC currently focuses on TB settings instead of general out-patient facilities.

4.3.2.3 MDR TB Management

South Africa is implementing the largest PMDT program to address the increasing number of MDR/XDR TB cases, and has introduced the GXP as first line of TB diagnosis countrywide to replace smear microscopy. These two interventions are possible thanks to a strong political commitment and large financial investment in the country. South Africa, reported 14,219 MDR TB cases in 2012, with only 6494 (45.7%) on treatment. The reported data raises questions on whether the gap is due to the difference between laboratory diagnosis based on the tests submitted and the number of patients diagnosed. This will be further discussed with a possibility of a formal investigation in FY14.

During the FY13 the USAID TB Program supported several activities to increase the capacity to decentralize MDR/XDR TB patients care and support. The MDR TB Training package was finalized and is being used in all the trainings. To increase local capacity to manage MDR TB, the TB Program jointly with the IUATLD facilitated a successful Master Trainer program, which has yielded positive results to date.

In 2010, only 22 MDR TB specialized hospitals were functional, resulting in long waiting periods for MDR TB patients requiring treatment initiation. Following the roll out of the decentralized MDR TB management supported by the TB Program, 45 MDR TB sites are now functional, 12 of which were opened during FY13. This followed the training of the 38 districts in FY12 facilitated by the USAID TB Program through a funded NGO.

MDR TB programmatic management follow-up workshops were held in uThungulu, eThekwini and Bojanala Districts. The workshop in Bojanala was organized to address and improve referral system of MDR TB patients between Bojanala and the MDR TB unit of Tshepong Hospital. Establishment of more decentralized units is expected to help reduce the workload at the central MDR TB unit of Tshepong Hospital.

Progress on MDR TB treatment outcomes was reported in several MDR decentralized units supported by USAID TB Program. KZN has been able to decentralize MDR TB care in 8 of the 11 districts, and set up 122 mobile teams for community patients' support. The TB Program currently funds an NGO in Zululand District to support c-PMDT. Positive MDR TB treatment outcome above 70% was reported in uMzinyathi District, followed by uThungulu, uMkhanyakude and Zululand Districts ranging between 52% and 60%.

EC managed to set up decentralized MDR TB units in five of the seven districts, with 57 mobile teams providing support to patients in the community. MDR TB and HIV integration in the province achieved excellent results with almost 100% of TB/HIV co-infected patients on ART.

To scale up the best practice model implemented in uMzinyathi District, the USAID TB Program supported benchmark visits to MDR TB decentralized hospital in Greytown for managers from EC, Limpopo, Free State, uThungulu and Zululand.

The MDR TB training curriculum has been updated with the latest National and International guidance and is available for use and dissemination.

Eastern Cape MDR/XDR TB data

In an effort to improve data management for MDR TB, the TB Program employed a temporary data officer to assist the EC DoH to support MDR TB data management. Below are the available data from the province through this support. In 2011 a total of 1,257 MDR TB patients were started on treatment and in 2012 this number was at 969 MDR TB patients started on treatment.

Table 4: Eastern Cape MDR-TB 2012 Data

Hospital & District	MDR-TB	New Case	Previously treated with first line drugs	Previously treated with second line drug	Total	HIV+	ART
Fort Grey Hospital - Buffalo City Metropolitan	Confirmed	119	154	48	321	224	211 (7 died, 5 started treatment in community, 1 refused)
	Not confirmed	34	15	1	50		
Jose Pearson Hospital-Nelson Mandela Metropolitan	Confirmed	58	242	42	342	238	238
	Not confirmed	36	51	12	99		
Marjorie Parish-Cacadu District	Confirmed	16	36	0	52	37	24 (12 on readiness, 1 died)
Nkqubela Hospital-Buffalo City Metropolitan	Confirmed	115	62	11	188	124	117(7 on readiness program)
TOTAL MDR-TB PATIENTS for Eastern Cape PROVINCE in year 2012	Confirmed	308	494	101	903	623 *(94%)*	590 (8 died, 5 started in the community, 1 refused treatment 19 on readiness program)
	Not confirmed	70	66	13	149		

4.3.3 IR 3- Increased demand of TB services

4.3.3.1 ACSM

Advocacy

In FY13 the USAID TB Program continued to support and participated in national events notably WAD 2012 and World TB Day 2013. The theme for this year's events was closely tied to soccer as South Africa prepared to host the Africa Cup of Nations (AFCON), an event that consistently weaves health themes to mark its inauguration.

Kick TB

The USAID TB Program took advantage of the football frenzy, using the Kick TB campaign model (www.kicktb.co.za) to engage young fans in health and wellness activities related to TB and HIV. Individuals were asked to take the ***Zero challenge – "Are dlale"* or "let's play it safe for zero new HIV and TB infections**". To continue the ***Zero Challenge***; USAID TB Program, together with the DoH used World TB Day to highlight TB in children in particular, as well as supported the Minister's call to focus on TB in Prisons. Outreach activities were hosted out of trucks branded with TB messages that were parked at official fan parks where crowds gathered for the games. To date, Kick TB has reached 108,941 learners**.**

Community Activities

- To build social cohesion and communities' response to key issues around TB, the USAID TB Program continues to implement the model of community dialogues in the key districts it supports. Through these meetings the TB Program has reached approximately 4,466 people.
- A strategic communication workshop was held with 30 partner NGOs in August 2013. The training was aimed at gathering community perspectives to address a critical area of TB in children. Their plans will influence the bigger roll out of the TB in children national campaign strategy.

Communication

Mass Media

To heighten awareness on TB and TB/HIV the USAID TB Program uses media as an integral part of its strategic communication framework. Two PSAs on cough etiquette' and TB in children were launched via national media focusing on the key messages of TB care and control. The 30 seconds PSAs were broadcast to an audience of 28 million people (via both TV and radio) for WAD, and 6.7 million (via TV) for World TB Day. In addition to the national media campaign, community media outputs including branding taxis, taxi rank TV reached 4.3 million commuters.

Roundtable Discussion with Journalists

To mark the beginning of TB Awareness Month (on 6th March), the USAID TB Program in partnership with the HIV/AIDS Media Project hosted a health media cafe with journalists from different media houses to explore in detail the impact of TB in South Africa. Prof Fourie was invited as a guest speaker.

Events

- USAID TB Program participated at the 6th South Africa AIDS Conference**.** The conference comes in the time when the countries strategic plan on health acknowledged and makes commitment to integrate TB and HIV care. The TB Program had a poster and an oral presentation.

- USAID TB Program funded a community event in Greytown (KZN) to honour 60 MDR TB patients who successfully finished their two years of treatment. More than 150 health care workers central to the success of the community MDR model attended the event. A video documentary is underway to evidence best practice of the community MDR model with the view to influence decentralization of MDR in other provinces.

Research

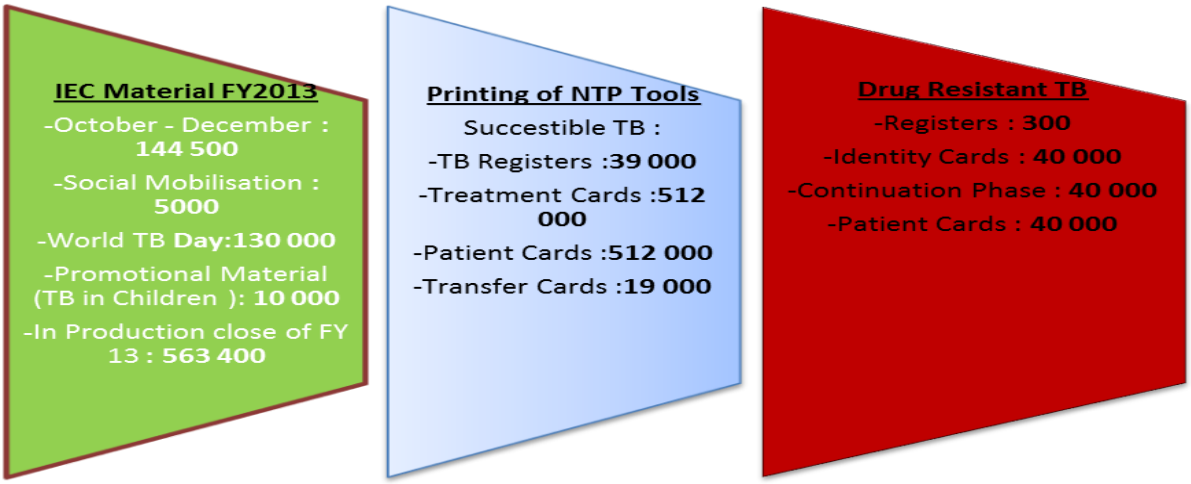
- USAID TB Program concluded a survey on knowledge and attitudes of the SAN community in the rural part of Northern Cape. The aim of the study was to influence the development of relevant ACSM strategy for this community.

- USAID TB Program is partnering with Rhodes University on a randomized controlled study to evaluate the impact of medicines information materials on knowledge, adherence and self-efficacy in TB patients with limited literacy skills. Feedback from the study will help in the development of patient centred information brochures and presented at next year's 4th South Africa conference.

Development of Information Education and Communication (IEC) Material

Information, education and communication (IEC) material is a critical component of ACSM, especially as a strategy that anchors efforts on interpersonal communication with individuals, communities grappling with the devastating dual impact of TB and HIV. ***Table 5*** gives a summary of printed in FY13.

Table 5: Summary of IEC materials printed



TB South Africa Website

The website continues to be the public link to the work of the USAID TB Program. Website queries from the public requesting more information on TB and TB/HIV are received and acted upon. From the website, a partnership was initiated with Ms. Sonal Patel - a PHD student at Rhodes university school of pharmacy - who requested USAID TB Program to collaborate as a hosting partner in her research to test the impact of patient-centered information leaflets.

In this reporting period the TB Program's website (http://tbsouthafrica.org) had 2,166 visits; of this 26% were first time visitors. Popular search terms leading users to the site include: TB in South Africa, TB in Africa and Aurum Institute. Mainly, visitors focus on these tabs; TB SA Grantees, Improve quality of TB services, Basic TB management and treatment, and where we work.

4.3.3.2 Small Grants

The Small Grants Program is aimed at providing funding to NGOs to support the objectives of the USAID TB Program. For FY13, the key activities were focused on funding at least 25 NGOs, identifying innovative projects for scale up, train NGOs on TB/HIV management, and link NGOs to facilities. By end FY13 a total of 52 grants had been awarded, exceeding the set target of 25. This included 18 under Wave 3 and 34 under Wave 4. Of this total, 46 are grassroots organizations, while the rest are either research organizations, ACSM or organizations engaged in PPM. ***Table 6*** depicts NGOs funded and the focus area as identified from the supported districts.

Table 6: NGO allocation by project focus areas

Project Focus Indicator	Provincial Focus Districts	Key Activities to be undertaken
Late collection of sputum leading to Low Smear Conversion Rates (new and re-treatment)	EC – Amathole, NMBHD MP – Nkangala LP – Waterberg, Greater Sekhukhune NW – Mahikeng NC – Pixley ka Seme	Allocation of CCGs in selected champion facilities Close monitoring of smear positive patients (TB Diary management) DOT and support groups Adherence counselling Family counselling
Low Cure Rates	EC - Amathole KZN – eThekwini MP - Nkangala	Default management Adherence counselling DOT and support groups
TB in children	EC – NMBHD, Amathole KZN – eThekwini WC – Cape Winelands and Cape Metro	Follow up index cases and screen their household members(intensified household screening for all index cases, prioritizing smear positives) DOT children on IPT
Follow up of MDR patients in the community	EC – Amathole, NMBHD NW – Bojanala KZN - Zululand	c-MDR in NMBHD and Bojanala follow up and screen contacts of MDR index cases DOT including injections for MDR patients
ACSM (death, late presentation, ART uptake, default)	EC – Amathole, NMBHD KZN – Zululand MP – Gert Sibande LP - Greater Sekhukhune	Targeted ACSM activities Engagement of THPs in Zululand
Public Private Mix	EC KZN WC NW LP	Targeted workplace programs e.g. mining, general industries, farming, HTA

Capacity building for NGOs

To ensure that NGOs have the capacity to implement their projects, training is provided based on the training needs identified at project commencement. Improvements have been noted in the capacity of the NGOs to implement and monitor their activities between FY12 and FY13 through the support engagement of Provincial Coordinators in grantee activities. A total of 714 community care givers were trained on Basic TB/HIV Management, while 32 participants from 30 NGOs were trained on ACSM activities. Further training was provided on management and finance, reporting and the USAID TB Program as part of orientation to 112 NGO members during the post award workshop.

Key achievements in FY13 by type of activity

Intensified Case Finding:

As part of the five I's identified as priority in the NSP HIV and AIDS, STI and TB 2012-2016, NGOs conduct activities in the communities to increase access in order to identify patients early. A total of 193,463 people were reached with TB/HIV messages, while 105,910 of these were screened for TB. Four thousand five hundred and seven (4507) clients were confirmed with some form of TB disease.

Improving treatment adherence

As part of supporting PHC reengineering, 38 funded NGOs have been linked to 183 health facilities. Linkages are aimed at reducing loss to follow up, improving compliance to TB treatment and

providing treatment support. During FY13, 4669 TB patients were on DOT through the NGOs, including 162 prison inmates.

In Amathole and NMBHD, where high loss to follow up has been reported, TB treatment lost to follow up retrieval rate is reported at 90% in facilities. The NGO reports are being linked to facility reports to ensure that improvement are realized in the facilities.

A special project to pilot the TB treatment adherence model through the PHC re-engineering, linking TB patients to a network of Community Based Organizations (CBO) within a confined community has been funded. .

Special projects undertaken by funded NGOs

Scaling up c-MDR-TB Management through engagement of NGOs

The USAID TB Program provides technical support to the DoH on roll out of c-PMDT. Challenges in systems for follow-up of MDR TB patients managed at community level have been identified in different provinces. Philanjalo continued its activities to support implementation of c-PMDT through training managers, following up on decentralized sites and mentoring districts.

In North West Province, Bojanala District carries the highest burden of MDR TB, and has the highest number of patients lost-to-follow up during treatment. Following discussion with the provincial management and the district, two NGOs were funded to provide teams to support c-PMDT in Madibeng Sub-district in Bojanala. Funding was provided to St Francis Hospice in EC and Siloah Lutheran Church in KZN to support the program.

- ***Siloah Lutheran Hospital in Abaqulusi Sub-district, Zululand:*** Siloah is situated in a hard to reach area and complements c-MDR-TB management in this district. The district is among the best in c-MDR-TB management in the KZN as it has dedicated resources for this program. Siloah, in collaboration with the district, has dedicated two injection teams, currently providing support to patients. The organization collects sputum from all MDR suspects (contacts and patients not improving in spite of DOT) main challenge cited for the low patient numbers.

- ***St Francis Hospice in the NMBD, EC:*** NMBHD carries the highest MDR and XDR caseload in EC, with little or no resources to manage patients effectively post discharge from local DR units. Currently, there are 3 injection teams, looking after 113 DR-TB patients, 56 of whom are receiving daily injections at their homes.

To date, a total of 185 MDR-TB patients are currently supported under the grantees' DOT programs, 57 of these are receiving injections.

School Projects to increase awareness on TB

The DoH has prioritized School Health, and the USAID TB Program has identified NGOs to support this initiative, focusing on TB.

a. ***One Voice SA***: The organization is based in KZN. The goal of the "Early TB Detection" Project is to provide information to learners and Life Orientation (LO) educators on TB, MDR TB and HIV to promote early detection of TB. The target group for learners is 13-23 years, the age group which is at risk of contracting HIV. The project is being implemented in eThekwini, iLembe and uMkhanyakude. The

"Stand Alone" Facilitator Manual and Learner notebook was designed and 37 LO educators were trained. A total of 3,417 grade 8-10 learners were reached in the three districts.

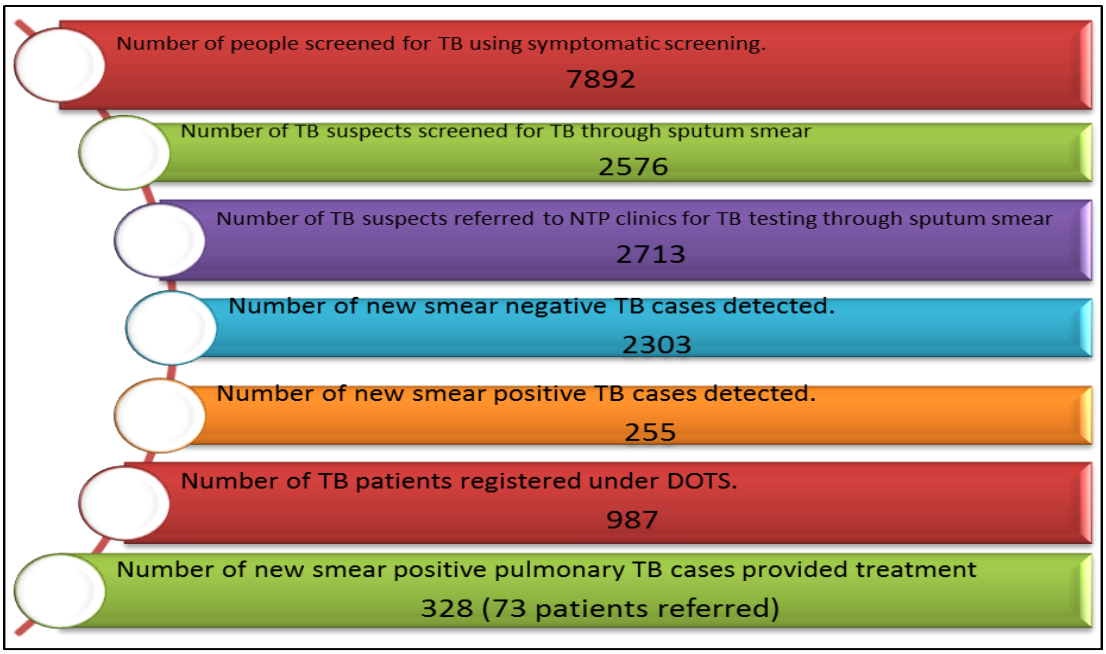
b. ***Impangele:*** "Siyanqoba" comic books were finalized and printed to be used for the project. The project uses drama to provide TB information to both learners and educator. Baseline assessments are conducted before the drama to provide information on the level of knowledge on TB; 1,200 leaners participated in the baseline survey. A total of 40 schools were visited in KZN and EC since the beginning of the project, distributing 14,920 comic books.

c. ***Lesedi la Batho***: Based in Mabopane, a township in North West Province, the project provides health education through awareness campaigns in seven schools. A manual titled "Fighting Tuberculosis through Street Soccer" is used to train different categories of workers to scale up TB activities. Social workers and sport coaches on TB were trained to support the activities. Six sports awareness tournaments were conducted in schools, reaching 1,450 people. A total of 1,199 clients (1074 learners and 125 Sizani Community workers) were screened for TB and 123 presumptive TB cases were identified and referred for sputum collection.

Wagon of Hope: TB Special Project

Wagon of Hope is implementing a special project supporting the TB program in Cape Winelands Wellington Sub-district. ***Table 7*** depicts work done on intensified case finding in the community, ending 328 TB patients started on TB treatment, including

Table 7: Wagon of Hope - Intensified Case Findings in the Community



A. Linkages of NGOs with facilities and districts

A total of 38 funded NGOs have been linked to 183 facilities in all provinces. The objective of providing linkages is to ensure that the continuum of care for TB patients is maintained. This enhances compliance to treatment and improves treatment outcomes. Although still a challenge, data

from the NGOs are being submitted to the facility data to improve TB treatment outcomes of the facilities.

B. Write up of NGO work

The design of the document for NGO write up: *Community-based TB Management: Best Practices and Lessons Learned from the South Africa Small Grants Program* was finalized and is being printed and will be distributed in Q1/FY14. The report highlights best practices and lessons learned over three years of implementation of its small-grants program, from 2009-2012.

4.3.4 IR 4 Improved Management of TB Support Systems

For FY13, key priorities for management support were to scale up TB/HIV collaborative model, conduct data verification, and continue ETR.net support. Train of managers and HCWs on TB program management, TB/HIV and analysis of data continued. The TB Program continued the joint quarterly DRAT; facility support visits with on-site mentoring and coaching.

4.3.4.1 ETR.net support and facility supportive supervision

Following the development of the SOP and initial implementation in 2012, the activity was continued and improved upon in FY13. All the districts are provided with quarterly ETR.net support, which involves running data quality reports to identify gaps in the reports, printing out facilities reports to identify specific challenges, and listing of patients with gaps. The facilities are notified to update if information is available. Facilities with major challenges are then identified and provided with support supervision.

Facility supportive supervision was conducted for 497 facilities at least twice in FY13. The process involves on-site training, coaching and mentoring of facility staff based on the findings on the site. Jointly, the teams then developed QI plans that are monitored on a quarterly basis.

4.3.4.2 Peer Review and TB/HIV Collaborative

Through the TB/HIV Collaborative model, which uses the PDSA cycle, the USAID TB Program trained HCWs including managers on QI methods. As part of the training, facilities were capacitated to analyse empowers them to be able to plan and monitor programs. UMgungundlovu and eThekwini Districts have been able to conduct the workshops quarterly to ensure sustainability of improvements achieved.

4.3.4.3 Data Verification Exercise (DVE)

The USAID TB Program was requested by National TB Control Programme (NTCP) to assist in ensuring quality data being reported by the TB Program-supported districts and sub-districts. An SOP was developed to guide and standardize the process for replication. DVE was then carried out in various reporting units with the aim of identifying gaps in the TB and TB/HIV data management system and addressing them with relevant interventions. The exercise also sought to identify good TB and TB/HIV management practices with the hope to replicate them in the sub-districts and districts that are besieged with the same challenges. The exercise was carried out jointly with DoH HCWs and TB coordinators.

Key to the tables below:

Red	-	*indicates a decline post-DVE i.e. initially over-reported*
Green	-	*indicates an increase post-DVE i.e. initially under-reported*
No fill	-	*indicates no change post-DVE i.e. initially reported accurately*

Table 8: Before and after – BC

		Q1:2013		Q2:2013	
Sub-district	Indicc	Pre-DVE	Post-DVE	Pre-DVE	Post-DVE
Botshabelo	BC	36.1%	38.6%	61.7%	57.4%
N Mandela A	BC	84.8%	83.0%	86.5%	79.7%
N Mandela B	BC	90.3%	83.8%	86.4%	79.4%
N Mandela C	BC	72.0%	81.4%	79.3%	83.7%
Thaba Nchu	BC	89.1%	89.1%	80.2%	82.1%

As shown by ***Table 8***, two sub-districts (Nelson Mandela A and B) had over-reported the BC by about 7% each in Q2:2013 and also in Q1:2013; while the third sub-district, Nelson Mandela C under-reported in both quarters.

Refer to ***Table 9*** *below*: The DVE was pivotal in surfacing gaps in the TB registers. Remarkable decline of the proportion of the TB patients with 'no smear' can be noted in Nelson Mandela A Sub-district, of about 32% in both quarters, thereby increasing the smear conversion rates of the same periods. The same success was observed in the other two sub-districts in the same district as well.

In Ramotshere Moiloa Sub-district, pre-DVE data matches the post-DVE data, implying that there was accurate reporting in Q2:2013 on smear conversion rate.

Table 9: Before and after – Smear Conversion for new SS+ cases

		Q1:2013		Q4:2012	
Sub-district	Indicato	Pre-DVE	Post-DVE	Pre-DVE	Post-DVE
N Mandela A	SC rate	53.4%	79.5%	53.4%	80.4%
	No smear	37.3%	3.8%	37.3%	5.3%
N Mandela B	SC rate	46.3%	76.2%	46.3%	76.7%
	No smear	44.5%	4.5%	44.5%	8.4%
N Mandela C	SC rate	52.5%	74.4%	52.5%	73.1%
	No smear	33.3%	5.2%	33.3%	10.7%
Ramotshere Moiloa	SC rate	69.9%	73.4%	69.7%	69.7%
	No smear	18.3%	14.9%	10.5%	10.5%
Thaba Nchu	SC rate	89.2%	92.3%	87.7%	89.7%
Botshabelo	SC rate	75.3%	77.3%	81.9%	84.7%

It is not entirely an adverse realization to have the declines post-DVE period. Although declines were realized on certain indicators, it can be noted that the quality of data improved; in other words, this became an accurate representation of TB management at the PHC facility level. Merits of accurate data need not be over-emphasized.

Recommendations to remedy these were specific and agreed upon with each facility/sub-district/district where the exercise was undertaken. Such recommendations included, but not limited to: training of operational managers on the TB program, training of data capturers on data management, training on TB/HIV collaboration, improved use and monitoring of the TB appointment diary and on-going supportive supervision visits.

Table 10: Before and after – Treatment Outcomes for new SS+

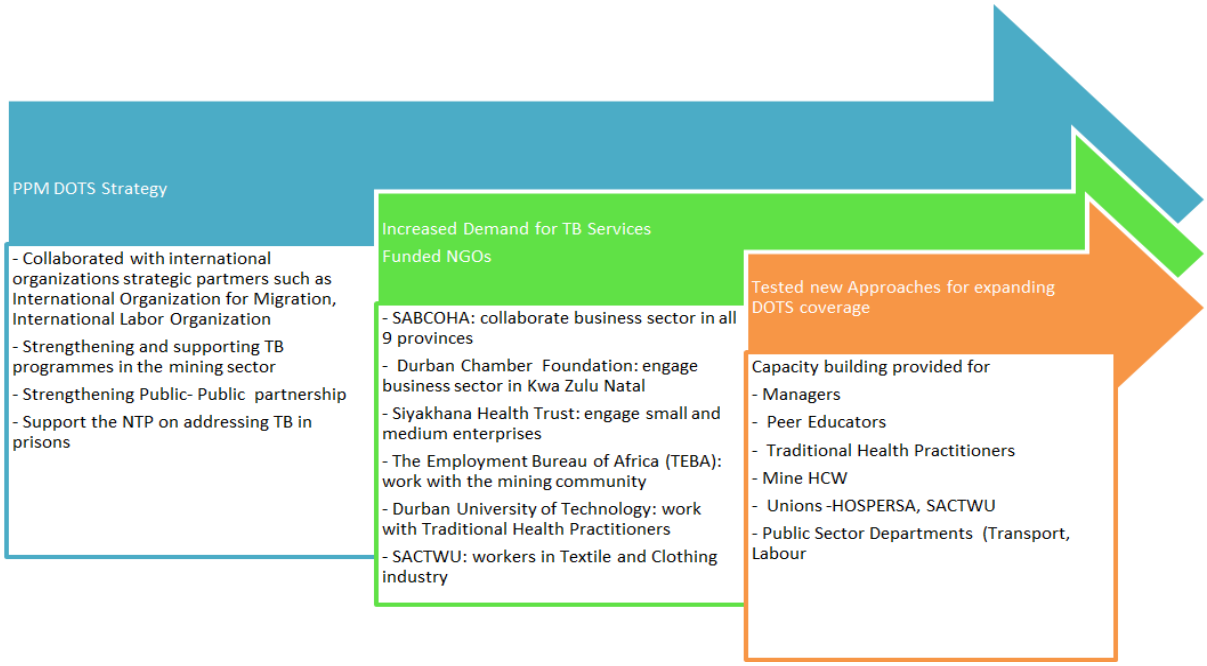
		Q1:2012		Q2:2012	
Sub-district	Indicator	Pre-DVE	Post-DVE	Pre-DVE	Post-DVE
N Mandela A	Cure rate	71.0%	72.8%	65.3%	65.0%
	Rx success rate	76.4%	77.8%	71.5%	73.2%
	LTF rate	8.7%	9.3%	8.6%	10.7%
	Not eval rate	1.5%	0.0%	5.9%	0.6%
N Mandela B	Cure rate	60.7%	70.2%	68.8%	66.8%
	Rx success rate	70.0%	76.4%	76.3%	78.4%
	LTF rate	8.1%	8.4%	15.4%	13.3%
	Not eval rate	6.7%	0.0%	2.0%	0.8%
N Mandela C	Cure rate	54.6%	55.8%	55.4%	58.1%
	Rx success rate	62.8%	67.9%	64.2%	69.5%
	LTF rate	18.9%	20.0%	17.2%	18.8%
	Not eval rate	5.6%	0.0%	6.3%	0.0%
Ramotshere Moiloa	Cure rate			54.8%	54.8%
	Rx success rate			71.0%	72.6%
	LTF rate			12.9%	14.5%
	Not eval rate			3.2%	0.0%
Thaba Nchu	Cure rate	59.6%	62.3%	72.7%	73.2%
Botshabelo	Cure rate	73.5%	74.0%	63.2%	66.1%

4.3.5 IR 5: Tested New Approaches for Expanding DOTS Coverage

USAID South Africa TB Program Public Private Mix (PPM) Approach for TB Control

PPM is one of the strategies that the USAID TB Program uses to address challenge of access to TB care, treatment and support in the private sector. The TB Program applies PPM to promote new approaches and partnerships for delivery of TB care by engaging various health care providers that exist in South Africa. Involvement of private providers and NGOs in the delivery of TB care not only expands the number of delivery points making it convenient for TB clients, but most importantly expands the resources available to them. The activities in FY2013 included the following:

- Building capacity through knowledge and skills enhancement of health care workers;
- Improving systems for case management at facility level by private health care providers;
- Strengthening linkages between health facilities and laboratory networks;
- Improving DOTS implementation strategies to reduce multi-drug resistant TB (MDR-TB) as well as improved management of MDR TB patients;
- Improving capacity of HIV testing sites to provide TB screening to all HIV+ clients;
- National and local advocacy; and
- Supporting private sector involvement (e.g. mines, industries, and medical schemes) in TB service delivery.



Addressing TB within private and public health care providers in South Africa

Although the public sector provides health services for the majority of the South African population, private for-profit providers serve a significant portion of the population. The USAID TB Program is collaborating with the service providers to deliver a comprehensive approach for their systematic involvement in TB control.

WHO has documented that not all health care providers are actively involved in early TB detection, diagnosis, treatment and referral of TB patients. The perception and understanding of TB as a public health challenge varies across providers and stakeholders; and that delay in the timely diagnosis of patients with pulmonary TB remains a serious challenge in the health care sector. There are other difficulties affecting the quality of health care, which include cost of living expenses and decreases in take home pay for patients (i.e. medicines, transportation, lost work hours), as well as complications related to the poor adherence to treatment and loss of life due to health problems that are often treatable or curable.

Generally, the National Tuberculosis Control Program (NTP) has an insufficient number of providers to address the serious health threat caused by TB. The participation of other health providers is essential in order to join forces and achieve more effective TB care and control. This can be accomplished through the use of best practices and guidelines that are clearly outlined in international documents and reiterated in official NTP tools.

TB in the mining sector is a massive challenge and a top priority for DoH. South Africa has at least half a million mine workers, with the highest TB incidence in the world. In FY13, the USAID TB Program supported initiatives aimed at addressing the scourge of TB in the mines. The activities included providing technical advice in the development of the Mining Led Stop Project Business Case, which was presented to chief executive officers from some mining companies. The

USAID TB Program's approach has emphasized developing programs, and TB service linkages within small and medium size mines in Limpopo and Gauteng Provinces. Jointly with the DoH, the project also facilitated local community based TB awareness and treatment services with mining communities. Technical support provided to small and medium size mines included:

- Technical assistance on integrating TB into HIV workplace policies
- Conducting assessment of TB management in selected mines in Limpopo province
- Strengthen TB programme management in the mining sector
- Capacity building of clinical staff
- Provision of IEC materials on TB

The TB Program's support for improving TB services within the mining sector focuses on developing lasting multi-sectoral partnerships geared around the following activities:

- **Advocacy and consensus building** among mine operators, mine health services, mine labourers' representatives, and district DoH on practical steps to implement the objectives within the declaration;
- **Development of service linkages between TB and other health and social support** agencies working with current and ex-miners and mining communities; and
- **Assistance to develop and expand TB workplace programs** in small and medium sized mines.

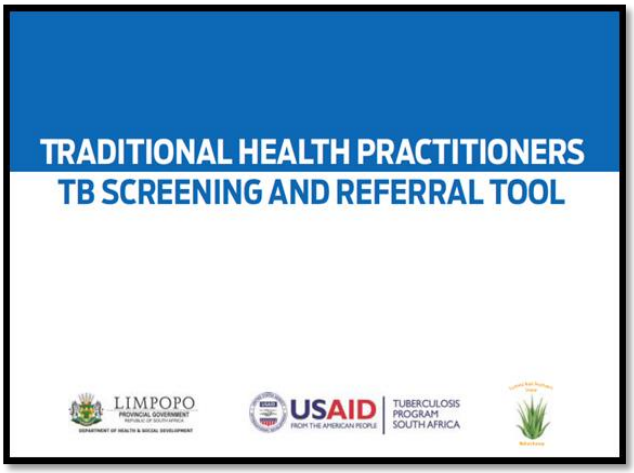
The TB Program trained peer educators from the government departments on basic TB management. To address the scourge of TB in prisons, the TB Program is building the capacity of DCS, by providing training on TB/HIV collaborative to all Regional Health Services in the nine provinces. The USAID TB Program provided TA to the development of 2013 national guidelines for the management of TB, HIV & STIs in correctional services, which was launched during the World TB Day 2013.

Further support to DCS has been provision of TB screening tool, IPT registers, and IEC material to facilities.

In addition, the USAID TB Program builds the capacity of clinical staff working in the mining sector. The USAID TB Program team provides information and training on the usage of NTP tools and registers.

Small grants funding to local NGOs is one of many ways in which the TB Program applies the PPM approach to engaging health care providers in the private sector to promote standardized TB care and control. For example, the TB Program provides a small grant to the Southern African Clothing & Textile Workers Union (SACTWU), to help workers promptly access TB services and adhere to treatment, promoting the long term health and viability of their workforce. Between June 2010 and March 2011, SACTWU supported 295 factories on implementing infection, prevention and control (IPC) plans. Over 30,000 factory workers were screened for TB (including those receiving HIV Counselling and Testing). Supports in the workplace settings addresses factors affecting TB diagnosis and treatment adherence including:

- Fear of stigma and discrimination;
- Limited or non-existent wellness programs in workplaces to support health seeking behaviour;
- Inadequate TB/HIV workplace polices;
- Weak linkages to public health service providers; and
- Poor implementation of IC measures



The USAID TB Program also works with THPs to strengthen TB symptomatic screening and referral

systems. The engagement of THPs for TB control came as a result of a mortality study conducted by the USAID TB Program team in the rural area of Greater Sekhukhune District. One of key findings from the study was the delay in TB diagnosis (i.e. patients presenting late to the health facility). THPs contribute to increased options for communities when seeking healthcare services. The majority of rural inhabitants such as those in Greater Sekhukhune District seek health advice and treatment from traditional healers before visiting a PHC facility. Therefore, the USAID TB Program convened stakeholders from THPs and invited representatives from the DoH team. During the stakeholders' meeting, THPs were linked with their local area PHC facilities. From this meeting, a total 30 THPs were selected for training; these THPs will also serve as master trainers on basic TB management.

As part of supporting the THP engagement in TB control, a TB screening and referral tool was developed and is being used for screening and referral of patients from the THP practice area to the DOH facilities.

5 CHALLENGES

5.1 Implementation Challenges and Problem Resolution

5.1.1 Patient Management:

5.1.1.1 Low Bacteriological coverage (High No Smears at Pre-treatment)

- Introduction & rollout of new tests in the absence of revised guidelines & tools, leading to:
  - Incorrect implementation of the new algorithms
  - Lack or improper recording & reporting of data

Interventions: training on GXP, TB tools have been printed to support the new tools

5.1.1.2 High proportions of lost-to-follow up rate in NMBHD, Ramotshere Moiloa, Mahikeng, Amathole, eThekwini, Mangaung and Cape Winelands.

Interventions: NGOs have been funded in all the districts except Mangaung. The NGOs have been linked to facilities to enable them to work closely with the facilities to impact on the loss to follow up. This is discussed in section IR3, grants management. A number of NGOs have been funded to provide support to districts with high lost-to-follow up rates.

5.1.2 TB/HIV Collaboration:

5.1.2.1 *HIV Care for TB/HIV co- infected patients*

- Poor ART Uptake: The improvements observed in Amathole will be scaled up to other districts. In eThekwini and uMkhanyakude, data verification was conducted and updates are being captured.
- TB/HIV Collaborative model scale up

5.1.3 Management and Information Systems

- Lack of data capturers-
  Interventions: Data capturers were appointed in NMBHD and Nkangala. A data officer was appointed to support DR TB in EC.

6 COMMON AGENDA ITEMS

6.1 Project Administration

6.1.1 Conferences

The project presented a poster and an oral session at the SAAIDS conference, while the following 7 posters were presented the following posters at the Union Conference in Kuala Lumpur in November 2012:

- Oral Poster Presentation: Feasibility and reliability of mobile health application as an innovative M&E tool for TB contact tracing in eThekwini District, South Africa
- Multidisciplinary interventions for successful TB-HIV integration in 178 South African health facilities
- A partnership to reduce the rate of pulmonary tuberculosis cases initiated on treatment without smear microscopy, Mangaung district, South Africa
- Community based Organizations as key players in tuberculosis control: a success story from uThungulu district, South Africa
- Towards improved tuberculosis treatment data outcomes in uMkhanyakude District, KZN, South Africa: a monitoring and evaluation approach
- Improving tuberculosis programme performance through championing selected health facilities in South Africa
- Sustained improvement in tuberculosis programme performance after partner's exit: iLembe District, KZN, South Africa

6.2 Coordination with Local and Other Stakeholders

- ***John Hopkins Health and Education South Africa (JHESSA):*** The quarterly meeting with the JHHESA was held in August to discuss progress on the ACSM work plan. The meeting also finalized the decision to appoint an ACSM Officer to assist the ACSM Advisor. The ACSM Officer has been appointed.

7 PROJECT PLANS FOR THE NEXT YEAR (FY14)

IR 1. Improved quality of TB services

- Attend quarterly NTP TB meetings.
- Conduct supportive supervision to TB focal points in hospitals and facilities.
- Monitor an implementation of TB diaries in champion facilities.
- Follow up an implementation of operational plans for community MDR management.
- Monitoring implementation of GeneXpert for re-treatment diagnosis and management in sub-district, districts and Champion facilities.
- Conduct the TB Diagnostic Summit

IR 2. Increased Availability of TB Treatment

- Conduct Basic TB management, data management, TB/HIV, Infection Control and MDR TB Trainings.
- Conduct TB/HIV collaborative approach workshops.
- Conduct Infection Prevention and Control Risk assessments.
- Provide capacity building for Community health care workers in TB, TB/HIV management.
- Conduct training of master trainers on Clinical DR TB Management Training (IUATLD).
- Procure temporary structures for facilities with infrastructure challenges
- Conduct TB/HIV Summit Nationally and in provinces

IR 3. Increased demand for TB Services

ACSM

- Conduct community TB activation campaign for TB in children in identified districts.
- Conduct community dialogues.
- Distribute TB/HIV Pamphlets in all the supported districts.
- Flight PSA on TB in children and TB symptoms

PPM

- Conduct research on THP program in Limpopo to improve linkages between THPs and the area public health facilities
- Train private sector health care workers on TB and TB/HIV
- Conduct quarterly review meetings with Correctional Service Department

Grants

- Monitor Wave 4 grantees
- Train NGOs on basic TB and TB/HIV

IR 4. Improved Management of TB Support Services

- Participate in Provincial, districts and sub-districts quarterly TB, HAST and peer review meetings.
- Conduct data verification and validation exercises.
- Provide quarterly ETR and DHIS supportive supervision.

IR 5. New approaches towards expanding DOTS coverage

- Conduct study on A randomized controlled study to evaluate the impact of medicines information materials on knowledge in TB patients with limited literacy skills
- Conduct mortality review for Zululand district
- Conduct impact evaluation of IPT implementation in Sedibeng.