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SOUTH AFRICA**

# USAID TB Program South Africa

Annual Report (1 October 2009 to 30 September 2010)

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# Table of Contents

<b>LIST OF ACRONYMS .....</b>	<b>iii</b>
<b>1 EXECUTIVE SUMMARY .....</b>	<b>5</b>
<b>2 INTRODUCTION .....</b>	<b>7</b>
<b>3 OVERALL PROJECT PERFORMANCE .....</b>	<b>9</b>
<b>3.1 Geographic Coverage.....</b>	<b>9</b>
<b>3.2 General Results.....</b>	<b>10</b>
3.2.1 Improved quality of TB services .....	10
3.2.2 Increased availability of TB Treatment.....	17
3.2.3 Increased demand for TB Treatment.....	22
3.2.4 Improved management support systems .....	23
3.2.5 Small Grants Management Program .....	25
<b>4 PROVINCIAL RESULTS .....</b>	<b>27</b>
<b>4.1 Eastern Cape.....</b>	<b>27</b>
<b>4.2 Limpopo .....</b>	<b>28</b>
<b>4.3 Gauteng .....</b>	<b>28</b>
<b>4.4 North West.....</b>	<b>30</b>
<b>4.5 Northern Cape.....</b>	<b>32</b>
<b>4.6 KwaZulu Natal .....</b>	<b>32</b>
<b>4.7 Mpumalanga.....</b>	<b>34</b>
<b>5 CHALLENGES .....</b>	<b>36</b>
<b>5.1 Implementation challenges and Problem resolution.....</b>	<b>36</b>
<b>6 BEST PRACTICES/SUCCESS STORIES.....</b>	<b>38</b>
<b>6.1 Compelling individual-level success stories .....</b>	<b>38</b>
<b>6.2 Documentation of better practices that can be replicated or taken to scale .....</b>	<b>39</b>

## LIST OF ACRONYMS

AIDS	Acquired Immunodeficiency Syndrome
AMREF	African Medical research Foundation
ARV	Antiretroviral treatment
CBO	Community-Based Organization
CDC	Centre for Disease control
CHC	Community Health Centre
DOH	Department of Health
DOT	Directly Observed Treatment
DOTS	Directly Observed Treatment Short-course
DRAT	District Rapid Assessment Tool
DST	Drug Susceptibility Testing
EC	Eastern Cape Province
ETR	Electronic TB Register
FS	Free State Province
GP	Gauteng
HAST	HIV, AIDS, and Sexually Transmitted Infections and TB committees
HCT	HIV Counseling and Testing
HIV	Human Immunodeficiency Virus
HST	Health Systems Trust
IC	Infection Control
IPT	Isoniazid Preventive Therapy
IUATLD	International Union against Tuberculosis and Lung Disease
KZN	KwaZulu Natal Province
LP	Limpopo Province
LOP	Life of Project
MIS	Management Information System
MDR TB	Multi-drug Resistant Tuberculosis
MTSF	Medium Term Strategic Framework
MP	Mpumalanga Province

NC	Northern Cape Province
NDOH	National Department of Health
NGO	Non Governmental Organization
NHLS	National Health Laboratory Service
NJH	National Jewish Health
NMBM	Nelson Mandela Bay Metro
NTCP	National Tuberculosis Control Program
NW	North West Province
OR	Operations Research
PDOH	Provincial Department of Health
PEPFAR	President Emergency Plan for Aids Relief
POA	Plan of Action
PPM	Public-Private Mix
PSA	Public Service Announcement
PTB	Pulmonary Tuberculosis
SAG	South African Government
SCC	Strategic Coordinating Committee
SCR	Smear Conversion Rate
SWOT	Strengths, Weaknesses, Opportunities and Threats
TB	Tuberculosis
Three Is / 3Is	Intensified case finding, Isoniazid preventive therapy and Infection control
URC	University Research Co., LLC
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
WC	Western Cape Province
WHO	World Health Organization
XDR TB	Extensive drug resistant TB

## 1 EXECUTIVE SUMMARY

This report covers activities, achievements and challenges during the first year of the USAID TB Program South Africa. The TB Program started in October 2009 as a follow-up to the five year USAID TB TASC II Project which ran from 2004 to 2009.

During the first quarter (October to December 2009), activities focused on project start-up, work plan development, and preparations for implementation. Key project staff were hired and consultative meetings were held with the National Department of Health (NDoH) as well as with most of the provincial health departments (PDoHs) to identify key areas of focus for the TB Program. A call for proposals for funding through the Small Grants Program attracted 80 concepts papers, of which 33 were then developed into full proposals. Project implementation started gaining momentum at the beginning of the 2<sup>nd</sup> quarter in January 2010. Memorandums of Understanding (MoUs) were signed with a number of provinces, and the first round of small grants were awarded to 14 NGOs. It was also during the 2<sup>nd</sup> quarter that a management information system (MIS) was established to capture and track project activities and data for key indicators in the project monitoring plan (PMP). Staff was trained on the use of the MIS developed by BEA, a subcontracted women-owned small IT business.

Project implementation continued during the 3<sup>rd</sup> quarter, with activities extending to district level. Baseline assessments were completed and work plans revised and finalized per district. Other key activities included the following:

- Capacity Building and skills development to strengthen DOTS strategies;
- Updating clinical protocols and implementation of TB/HIV integration;
- Providing technical support and updating the electronic TB register.

The activities of the past year and more especially during the last quarter have focused largely on strengthening the four main strategic pillars of the project: improving quality of TB services, increasing availability of TB treatment, increased demand for TB activities and strengthening management of TB support systems.

Collaborative trainings to strengthen TB/HIV integration yielded good results, as evidenced by increased TB HIV testing and HIV TB screening in the supported facilities. The TB Program also worked with the International Union Against TB and Lung Disease (IUATLD) and National Jewish Health (NJH) in building capacity of TB program managers.

Following the successful hosting of a National Public Private Mix (PPM) Summit which was attended by 160 practitioners in August 2010, a PPM Working Group was established in eThekweni district in KwaZulu Natal. The project is currently designing an implementation strategy for expanding private sector participation in TB service delivery. This will include TB service provision through private providers as well as by involving employers and traditional healer practitioners in the country.

The project has also provided support to the NDOH's HIV Counseling and Testing (HCT) campaign, with a major focus on increasing TB screening on all clients who test for HIV. This has resulted in an increase in TB screening rates amongst HIV infected clients to more than 70%.

Over 1,000 industry workers and shift supervisors were trained on TB infection control in the work place, and more than 100 teachers were trained on symptoms and signs of TB through the supported

grants. School TB activation campaigns commenced in 3 provinces in collaboration with the NTCP's KICK TB campaign, reaching 820 school children. Two PSAs were released on national television and radio in this quarter, one on infection control and another on TB treatment adherence.

Another major activity during the year was the strengthening of the TB Management Information System. In the Nelson Mandela Bay Metropole (NMBM), this resulted in 100% timely data submission by facilities and improved quality of the Electronic TB Register (ETR) data.

In consultation with the provincial and district management teams, the Project identified 50 'Champion' facilities to be provided with regular technical support and supervision. This report presents some of the initial analysis of data collected at these Champion facilities, and already some improvements in key indicators can be seen.

It was also during the first year of the TB Project that a number of policy changes were announced by the DOH aimed at accelerating the achievement of the objectives of the South African Government (SAG)'s Mid-Term Strategic Framework (MTSF) 2009 – 2014. Although these were all changes implemented to improve quality of health services in the country, for the project it resulted in delays in startup activities in the provinces and districts.

Some of the challenges experienced during the first year of Project start-up and implementation include:

- Problems with the National TB Information System (i.e., ETR) resulting in poor data quality and making it difficult to adequately monitor progress and improvements in the supported districts;
- Difficulty in hiring and then retaining some key personnel such as the Project M&E Advisor. As a result, the data collected for the Project Monitoring Plan (PMP) was limited in both quality and quantity. With the recent hiring of a new M&E Director (starting October 2010), a process of revision of the PMP and data validation will be conducted as top priority so as to establish baseline values for all PMP indicators, as well as put in place a functional Project M&E System;
- The staff compliment for the Grants Programme had to be increased in order to accommodate the increased response from the RFAs
- Limited capacity of health care workers and unavailability of INH, resulting in slow implementation of IPT
- Limited number of local NGOs/CBOs with capacity to prepare proposals for funding under the small grants programs.

The project is working closely with the NTCP and other stakeholders to resolve the issues related with the ETR and other supply chain issues. An M&E Advisor has been recently recruited and plans to be fully integrated into the program by the end of October 2010. To increase the distribution of funds through local NGOs/CBOs, URC plans to conduct workshops in each province to help local groups prepare high quality grant proposals. We hope to initiate the first workshop in late November 2010.

Overall, the first year has been one of building and strengthening relationships with provincial and district teams, rolling out best practicing from the TB TASC II Project, as well as implementation of new activities based on the new project description.

## 2 INTRODUCTION

South Africa has continued to grapple with the dual epidemic of tuberculosis and HIV. Most affected is the young and economically active population. Poverty and high unemployment rates have greatly exacerbated the situation. Over the past several years, the National TB Control Program (NTCP) has made significant progress over the past several years, with additional financial and human resources allocated to TB control activities since the declaration of TB as a crisis in 2006.

The USAID-funded TB Program builds on the successes of the USAID-funded TASC II TB Project. Best practices identified during the USAID funded evaluation conducted early in 2009 are being expanded through the TB Program and include:

- Management and use of strategic information;
- Use of standardized analytical tools to improve quality of services; and
- Supportive supervision.

In addition, the TB Program has been designed so as to expand current programmatic strategies for improving early case detection, improving access to laboratory diagnostics, as well as to ensure that patients comply with TB treatment regimens, and provide appropriate and timely HIV care including ART treatment for patients co-infected with HIV. Overall, the TB Program builds on the dual approach used by URC during the past five years, working closely with:

1. The NTCP to build national support by mobilizing resources and creating a conducive environment for expansion of TB services; and
2. Provincial and district health departments as well as communities to create appropriate social mobilization and service delivery models for rapid DOTS expansion in the country.

The project also works with NTCP in developing strategic interventions that could rapidly address the TB/HIV and MDR/XDR TB threats. Support is being provided to the NDOH in implementing the National TB Strategic Plan for TB 2007 -2011 and the SAG's 10 Point Plan for health sector reform to improve the health for all South Africans. Through close collaboration with national and provincial authorities, the TB Program will expand TB care in the 18 high priority districts.

The project strategies include:

- Knowledge and skills enhancement of health care workers;
- Improved systems for case management at facility level;
- Strengthened linkages between health facilities and laboratory network (NHLS);
- Improved program management at district and provincial level;
- Improved DOTS implementation strategies to reduce MDR TB as well as improved management of MDR TB patients;
- Strengthened infection control to reduce nosocomial MDR/XDR TB infections at healthcare facilities;
- Improved capacity of HIV testing sites to provide TB screening to all HIV+ clients and improved capacity of primary health care clinics to provide on-site HIV testing to TB patients;
- National and local advocacy, communications and social mobilization (ACSM) strategies;

- Strategies to engage local communities in the management of TB patients;
- Private sector involvement (mines, industries, and traditional healer practitioners) in TB service delivery.

The expected results that the project technical and financial inputs are expected to produce are the following results:

- Achieved case detection rate of 70 percent and treatment success rate to 85 percent;
- 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 MDRTB and other problems in the TB service delivery system;
- improved understanding and support among the general population regarding TB signs, symptoms, referral, and treatment.

### 3 OVERALL PROJECT PERFORMANCE

#### 3.1 Geographic Coverage

Strategic consultative meetings with senior management in DoH and Provincial Heads of Health and program managers took place between November 2009 and February 2010. Implementation of project activities has begun in all nine provinces including Mpumalanga and Western Cape which experienced the longest delays with initial consultations (May and July 2010 respectively). Twenty one districts were allocated by the Provinces based on a combination of high TB case load and poor program performance. In 7 of the 9 provinces the districts allocated to the project are the poorest performing both within the province as well as in the country. **Table 1** below shows allocated districts by province.

**TABLE 1**

Province	District
Eastern Cape	Amathole
	NMBMM
Limpopo	Sekhukhune
	Waterberg
Free State	Motheo
	Lejweleputswa
	Fezile Dabi
Gauteng	Tshwane
	Metsweding
	Sedibeng
North West	Dr Kenneth Kaunda
	Dr Ruth Mompoti
	Ngaka Modiri Molema
Northern Cape	Siyanda
KwaZulu Natal	eThekwini
	UMgungundlovu
	UMkhanyakude
	Zululand
Mpumalanga	Gert Sibande
	Nkangala
Western Cape	Cape Winelands

Project geographical coverage represents 40% (21/53) of all the districts in the country, translating to over 730 health facilities.

### **3.2 General Results**

During the first quarter of project implementation (October to December 2009), a number of policy changes were announced by the DOH which were aimed at accelerating the achievement of the objectives of the SAG's Mid-Term Strategic Framework (MTSF) 2009 – 2014. These key strategic policy changes included the following:

- Health Sector 10 Point Plan, in which point 7 specifically emphasizes accelerated implementation of the National HIV/AIDS Plan and the reduction of mortality due to TB;
- Provision of integrated services for HIV, TB, Maternal and Child Health as well as sexual and reproductive health;
- Decentralization of services to PHC and nurse initiated diagnosis, treatment, and monitoring of HIV infected patients, including management of TB/HIV co-infected patients;
- Revised ART guidelines which include prioritization of ARVs for TB/HIV co infected patients and MDR/XDR TB patients;
- Revised National TB Control guidelines; and
- HCT guidelines and the launch of an HIV testing campaign which includes TB screening for all tested individuals.

Although these were all changes implemented to improve quality of health services in the country, for the project it resulted in delays in startup activities in the provinces and districts.

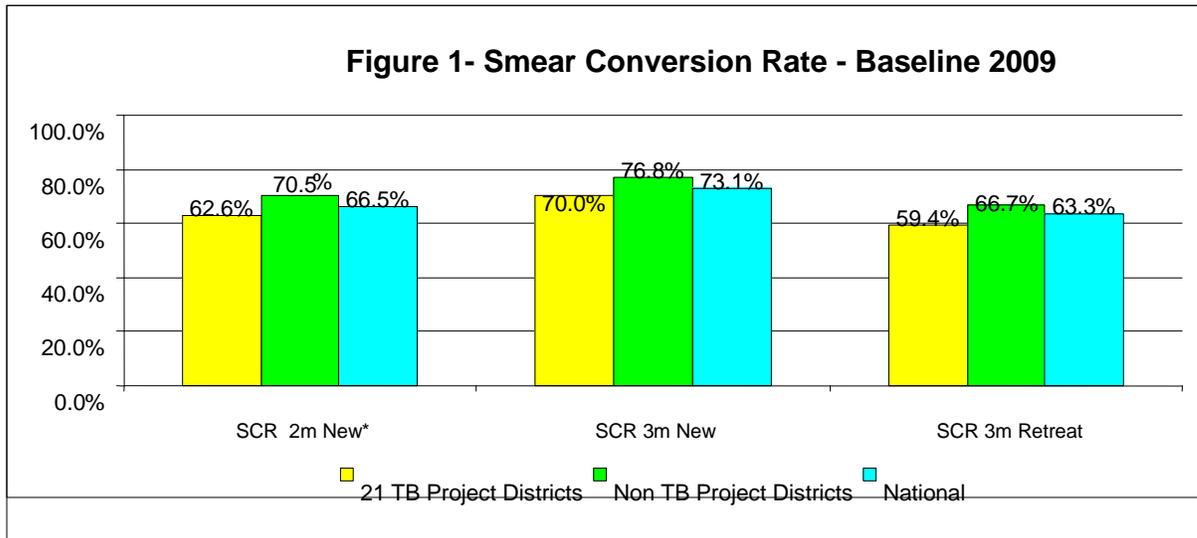
The TB Program activities for this first year focused on the four main strategic objectives namely: improved quality of TB services, increased availability of TB treatment, increased demand for TB activities and strengthening management of TB support systems.

To set baseline values for the PMP indicators as well as other performance indicators, the project initiated baseline facility assessments in each of the 21 district. A total of 221 facilities were selected using a purposive sampling method, based on performance of the facilities and in consultation with the district management teams. Training on the questionnaire and data collection was led by the Project Training Manager supported by the Project Extension and Provincial Coordinators. Data collection was done jointly by project and district teams. In this report, selected results are presented under each strategic area. A full report on the baseline assessments with complimentary quantitative data from the ETR as well as qualitative data from other sources will be produced and released during the 2<sup>nd</sup> quarter of 2011.

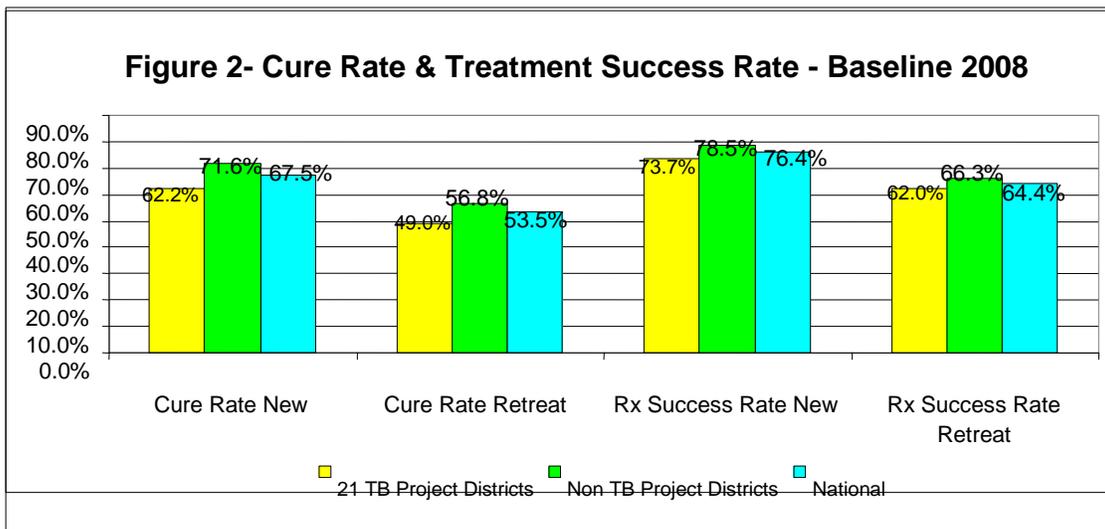
#### **3.2.1 Improved quality of TB services**

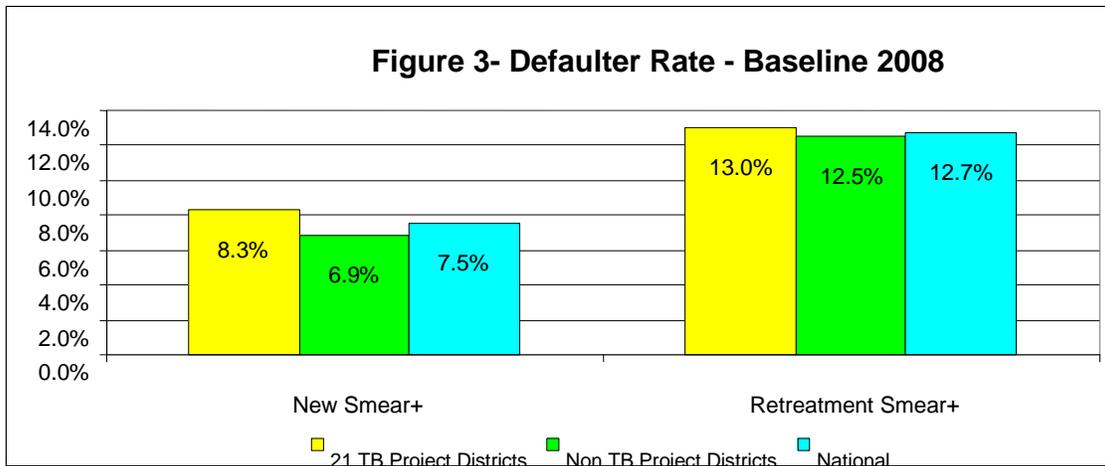
In 2009 the 21 supported districts reported 185,848 TB cases, 160,724 of which were PTB. Of these 62,558 were new smear positive cases (NTP ETR data September 2010). These numbers represent 46% of all TB cases reported in 2009. Twelve of the twenty one districts had cure rates of less than 60% in 2007, to date nine remain with cure rates below 60% with 3 of the districts having reached 60%.

Results from the facility assessment set the baseline (2009) for the PMP indicator ‘proportion of suspects with a smear positive results who are started on treatment and entered in the TB register’ at 81%. This is against a target of 85% to be reached by 2010.

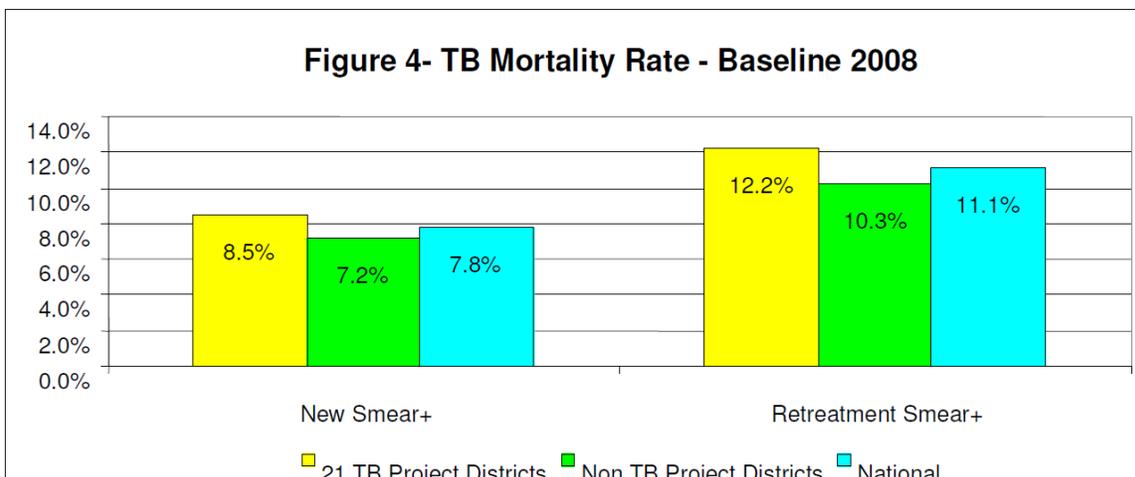


**Figures 1 and 2** below shows baseline values for the PMP indicators ‘Smear Conversion Rate’, ‘Cure rate’ and ‘Treatment Success’ and compares the 21 TB Program supported districts against the non-supported districts, and against the national figure. The project goal is to bring the 21 supported districts which currently have lower values to the same levels or higher than those of the non-supported districts by the end of the TB Program in 2014.

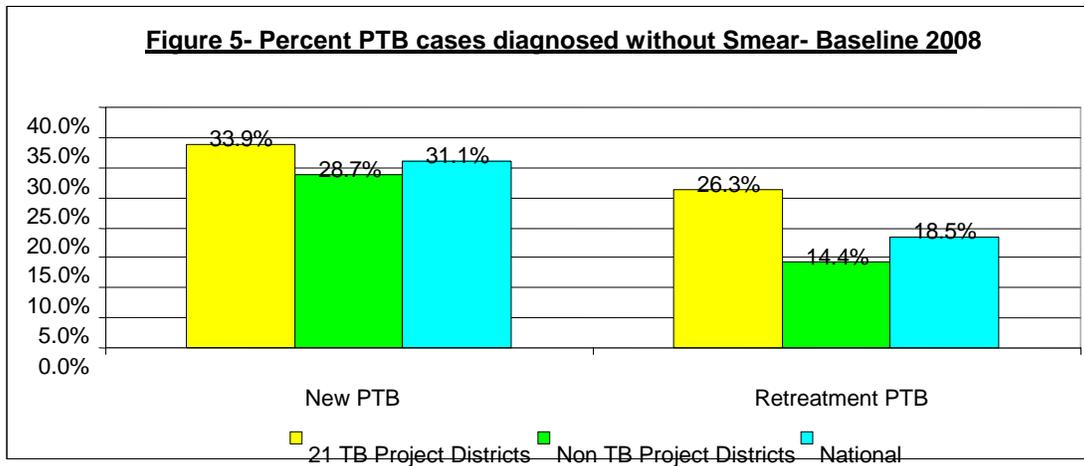




**Figures 3 and 4** below show that currently the 21 supported districts have higher defaulter rates and mortality rates than the non-supported districts. Through expansion of community based TB management and technical support to the districts, it is hoped that these values will decrease.



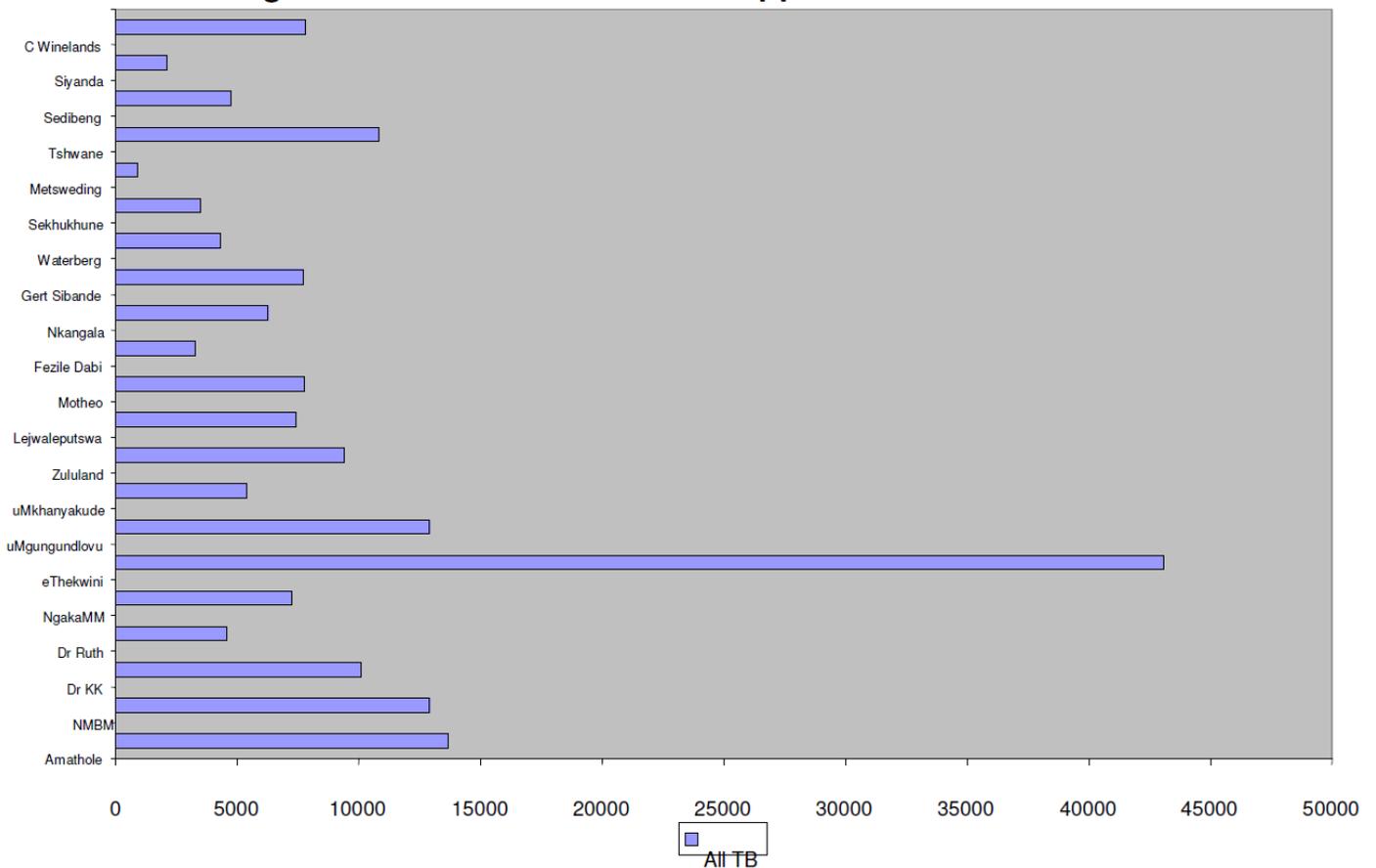
**Figure 5** below shows that throughout the country Pulmonary TB cases are still diagnosed without the collection of sputum smears, as demonstrated by the high percentages of PTB with no smear. Continued training and improved program monitoring systems will ensure health worker compliance with national guidelines and a reduction in this indicator.



### 3.2.1.1 District level TB Data

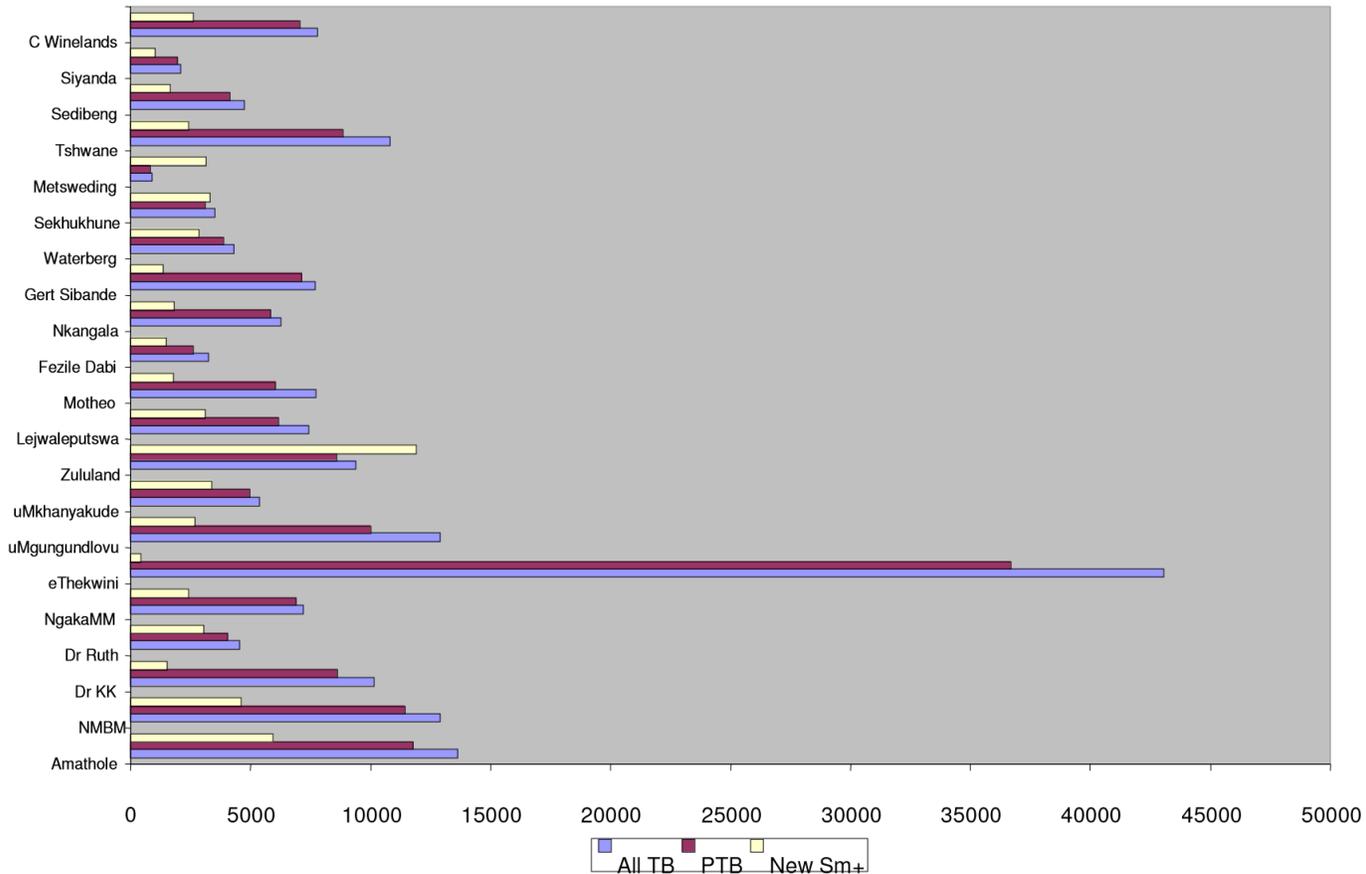
The burden of TB is very high in all the districts with eThekweni reporting the highest at more than 40000 cases in 1 year as shown in **Figure 6** below.

**Figure 6- All TB cases 2009 in supported districts**



**Figure 7** shows the proportion PTB that are sputum smear positive in each district for 2009. Over 60% of the allocated districts had a cure rate of less than 60% at the start of the project. Based on gaps identified, improvement plans are developed and training provided where required. Project interventions include strengthening DOTS implementation by improving compliance with guidelines. This is done through training of health care workers and facility support supervision to identify challenges and mentor staff to improve patient management at facility level and improve TB program performance at district level.

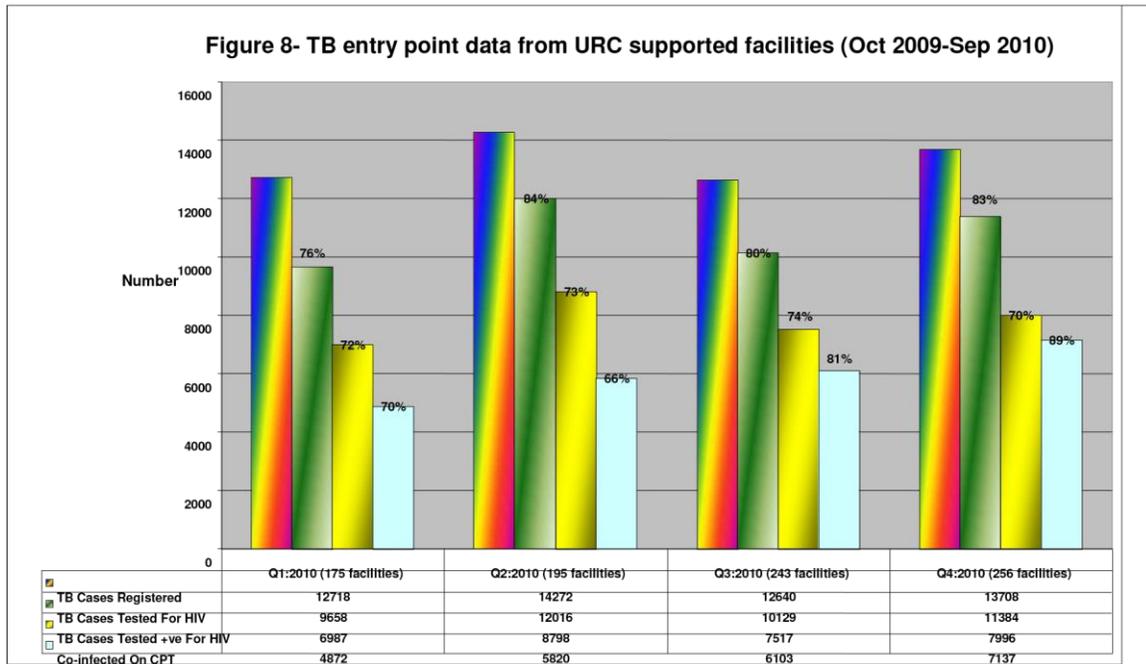
**Figure 7- Case Finding 2009**



The TB Program participates in existing District HAST, sub district and provincial TBHIV collaborative meetings in their various formations in 8 of the 9 Provinces, except in the Western Cape. These meetings generally include the TB and HIV/AIDS directorates, partners and other stakeholders where pertinent issues on implementation of the TB and TB/HIV activities are discussed and solutions solicited. In NW, EC and KZN (eThekweni and UMkhanyakude district), the Project was instrumental in the coordination and facilitation of these meetings.

There has been an improvement in TBHIV integration from the TB entry point, with data from supported facilities showing 80% of TB patients tested for HIV. Despite the high co infection rate

of more than 70%, referral of co infected patients with CD4 count less than 350c/ml for ARTs is still poor.



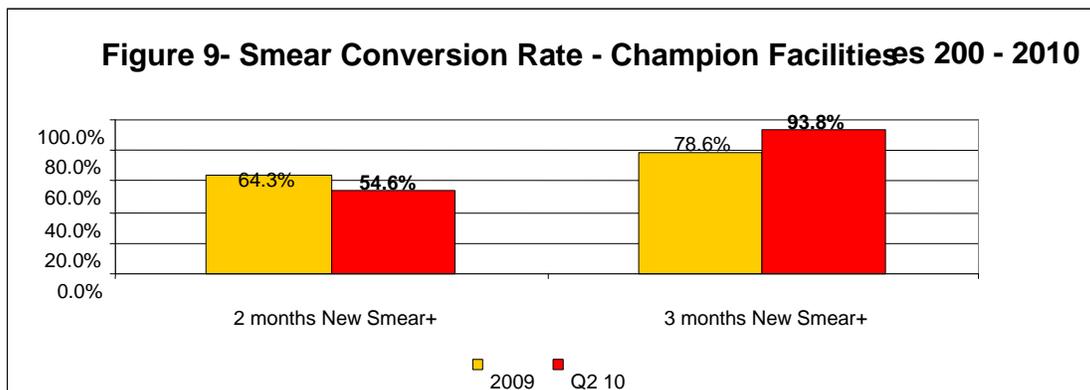
The project worked with the NTCP and HIV program to disseminate revised policy guidelines. To date, a total of 4,152 health care workers have been trained, with 2,387 trained in the last quarter of the year. The trainings are supported by mentoring and support visits provided by project coordinators to selected poor performing facilities. In this quarter 284 facilities were visited in 8 districts. District TB working committees facilitated by the project meet quarterly to discuss key TB program issues in five of the 21 districts, mainly NW, EC provinces and eThekweni district in KZN. In other provinces the project shares best practices at the provincial quarterly TB meetings. Technical assistance is provided to North West, Limpopo, Northern Cape, and KZN provinces to adapt and expand implementation of the new National policy framework on decentralized management of MDR TB. A model for MDRTB that strengthens district health systems has been developed by the project and will be piloted initially in eThekweni district. The project is continuing to use TB/HIV Collaborative trainings to strengthen TBHIV integration with good results demonstrated in TB HIV testing uptake and HIV TB screening by supported facilities (see table below).

**TABLE 2**

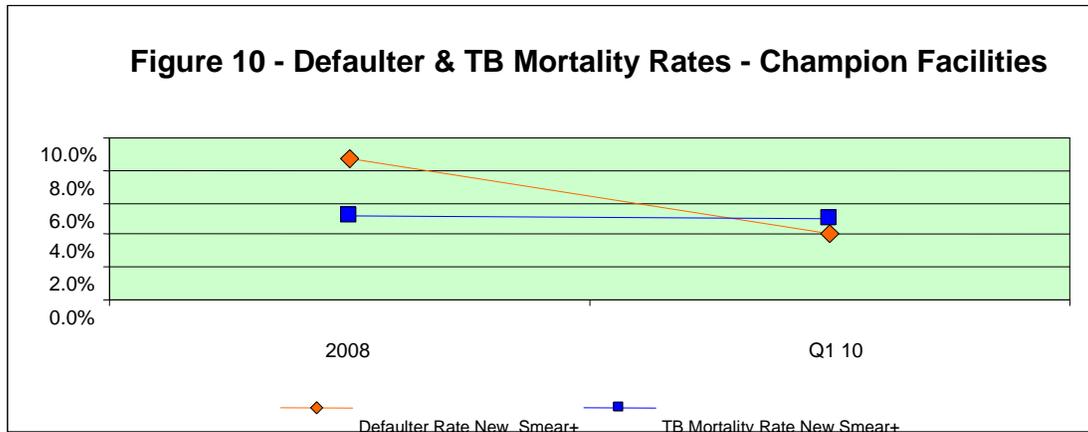
Data from 28 of the 41 Champion facilities (Oct 09-Sep 10)	Number	Proportion
No Of All Who Tested HIV+	8150	
No Of HIV+ Pts Screened (symptoms & signs) For TB	6317	77.5%
No Of All TB Cases Registered	6056	
No Of All TB Cases Tested For HIV	4835	79.8%

**3.2.1.2 CHAMPION FACILITIES**

The champion facilities, selected as demonstration facilities which would benefit from focused technical support from the Project have shown an improvement in the smear conversion rates of new smear positive cases at the end of 3 months, as shown in **Figure 9**. This data is from 41 facilities.



**Figure 10** below shows data from 41 champion facilities demonstrating a decrease in the defaulter rate following project interventions – use of calendars for patient follow up.



### 3.2.2 Increased availability of TB Treatment

Working with IUATLD and NJH the project is building capacity of TB program managers. Two trainings were conducted by both partners in Gauteng during July and August 2010. The principles of TB management course conducted by IUATLD were attended by 25 provincial TB program managers and their information officers. The NJH TB/MDRTB course for clinicians conducted in collaboration with Pretoria University and CDC was attended by clinicians mainly from Gauteng province. A total of 7,199 health care workers were trained in this financial year on TB, TBHIV, MDRTB and infection control. The training targets for the year were surpassed for both TB 4,152 trained (USAID funds) target of 3,000 and PEPFAR, 3047 trained, target of 2,000. Out of the number trained, 435 health care workers were trained in TB infection control.

The project hosted a national PPM summit in August 2010 which was attended by 165 general practitioners, private sector and NDoH program managers. The outcome of which has been the establishment of a PPM working group in eThekweni district. Support to the NDoH’s HCT campaign is ongoing, with major focus on increasing TB screening on all clients who test for HIV. TB screening rates amongst HIV infected clients have increased significantly as a result, to more than 70%. TB risk assessments have been conducted in 114 facilities, with 34 of 56 (60%) 12 month follow up assessment conducted this quarter showing an improvement in implementation of administrative measures.

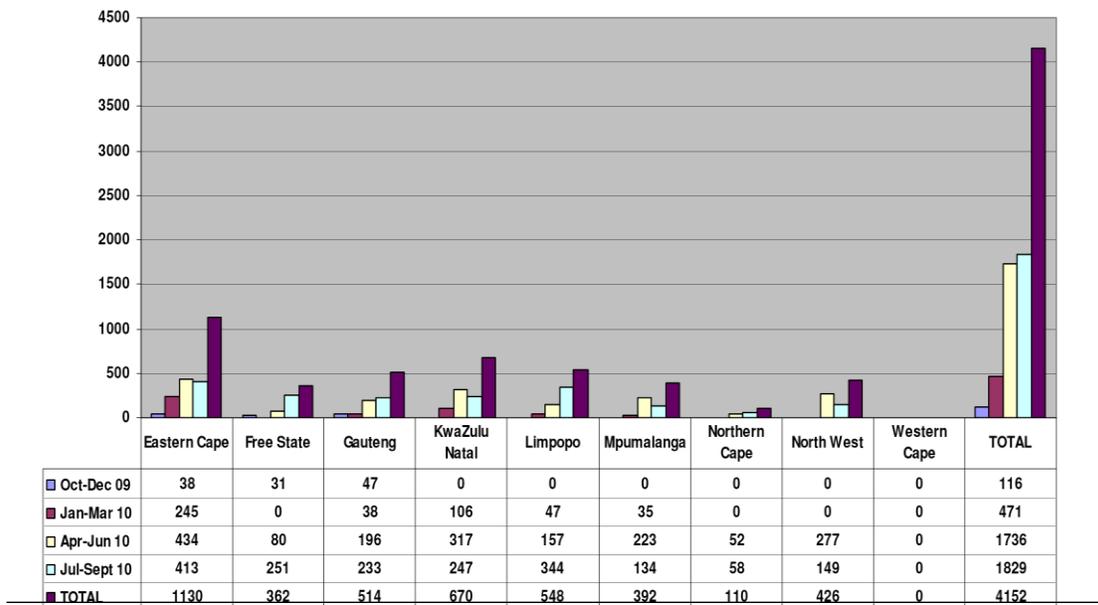
#### 3.2.2.1 Training

Training activities resumed in the last quarter following a slow start and in spite of the national civil servants industrial strike action that disrupted service delivery in the districts. The project’s training package on Basic TB management was revised to include recent policy changes. Training was provided in all provinces and included TBHIV and MDRTB management.

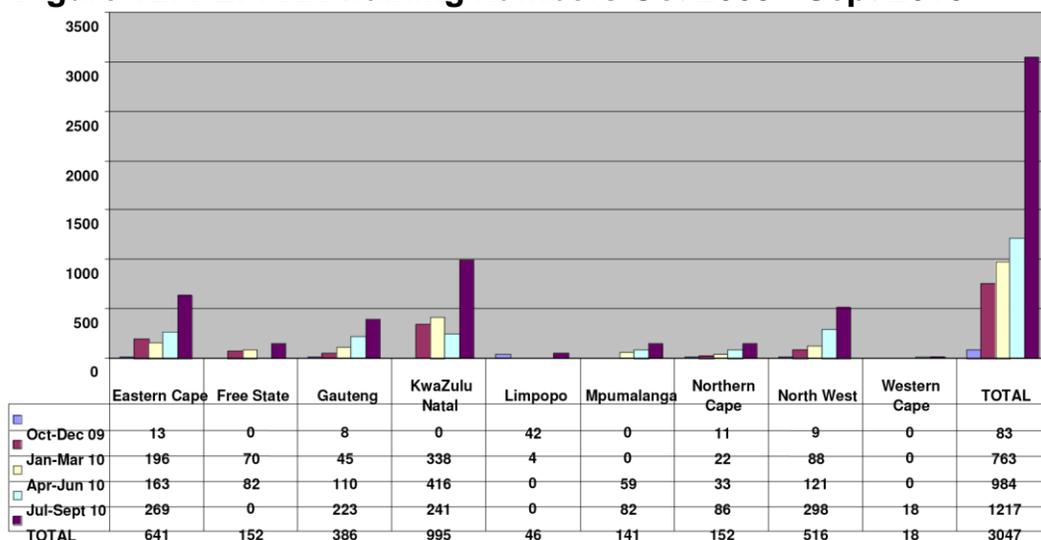
The country's first international course on Principles of TB Control was conducted in 19 July – 06 August 2010, facilitated by Dr Hans Rieder from our sub partner the IUATLD. The training was supported by the NTCP. The target audiences were TB Provincial managers, Health Information System Managers and USAID TB project staff. There were 25 participants representing Gauteng, Northern Cape, Free State, Limpopo, KwaZulu-Natal, Mpumalanga and Eastern Cape provinces, NTCP and staff from the USAID TB SA.

A total of 2,987 health care workers were trained on TB/HIV including the Three I's during the past year; this was more than the set target of 2,000 using PEPFAR funds. Of these 461 were trained on the new IPT guidelines. Most of the training on IPT occurred in the North West province, where implementation of IPT has improved, with 2,040 (67% of reported patients) HIV positive clients initiated on IPT in the last quarter. All provinces except, Western Cape were trained on the updated IPT guidelines. The IPT guidelines were distributed to all the supported facilities. (See **Figures 11 and 12** below).

**Figure 11: USAID training numbers Oct 2009 – Oct 2010**



**Figure 12: PEPFAR training numbers Oct 2009 - Sept 2010**

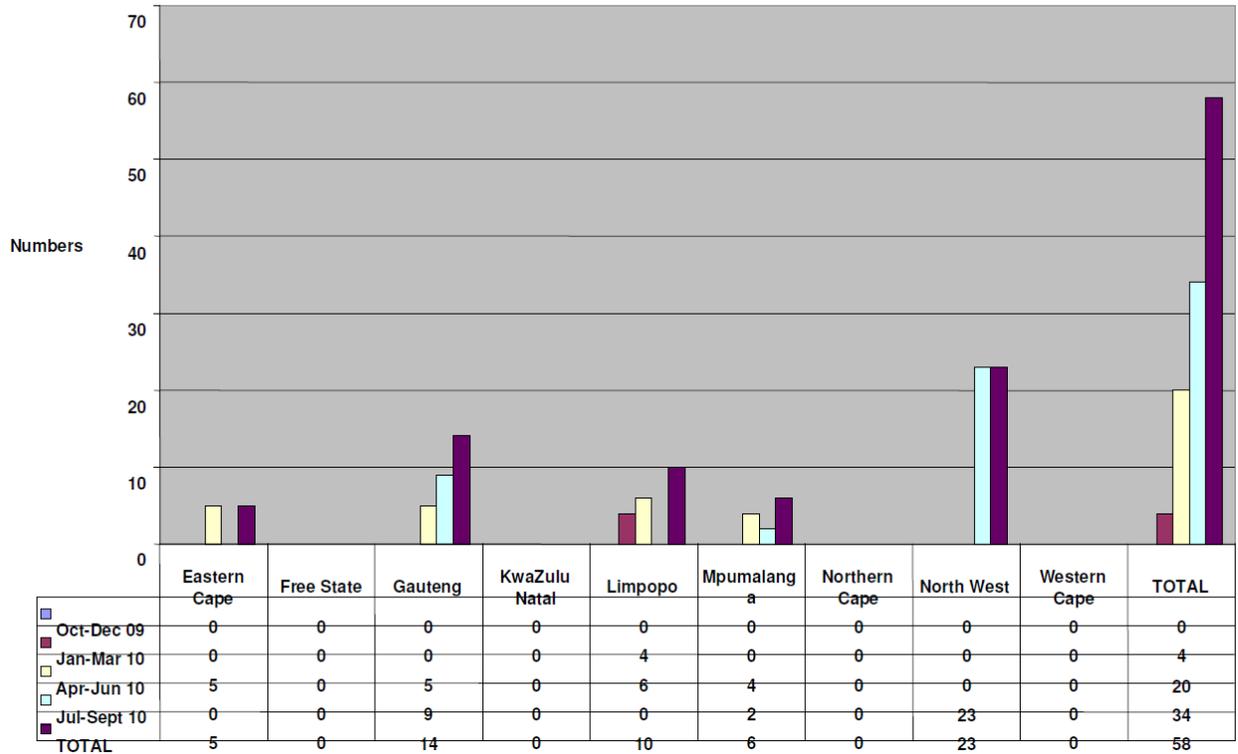


Training has been provided to 435 health care workers on infection control (IC). IC risk assessments were conducted in 144 facilities for this year, 85 of these had not had risk assessments done before and 59 were 12 month follow up. Facilities were assisted with on development of facility based infection control plans, establishment of committees, and identification of responsible focal person for infection control monitoring.

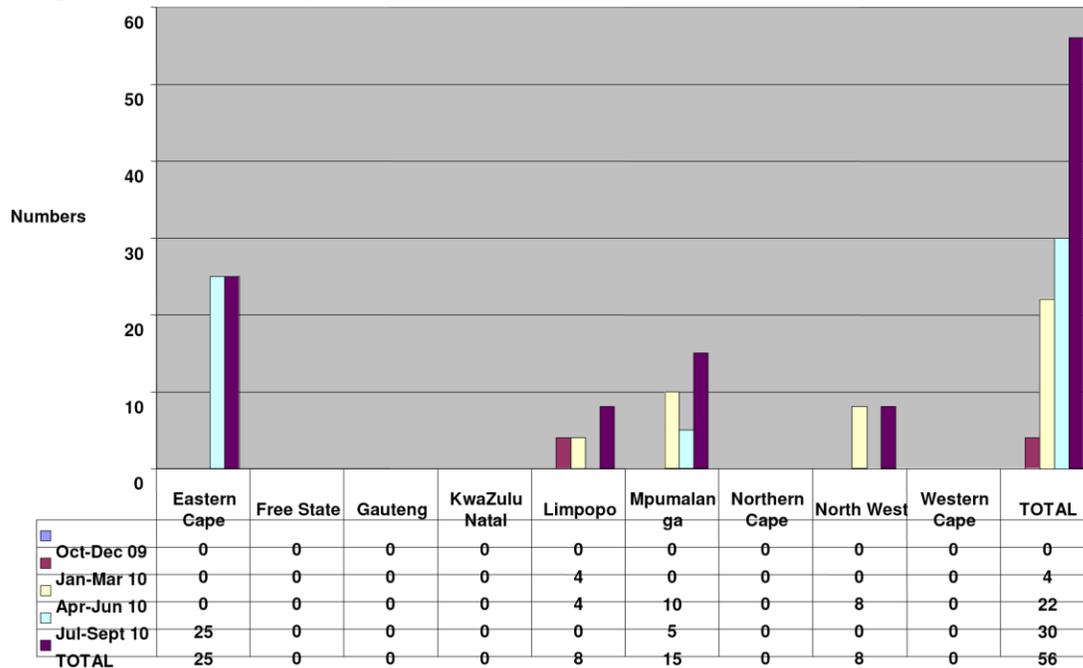
### 3.2.2.2 Risk Assessments

The PMP indicator on percent of facilities that conducted a TB risk assessment and had an infection control plan in place showed a baseline value of 25% for 2009, against a target of 40% to be reached by 2010. The number of facilities where Risk Assessments conducted during the year (Oct 09-Sept 10) was 114, representing 93% of the set target (120). The number of facilities with Infection Control Plan in place was 58.

**Figure 13 - Facility TB Risk assessments - new 2009 - 2010**



**Figure 14 - Facility TB risk assessments follow ups 2009 - 2010**



### **3.2.2.3 Strengthening Laboratory Services**

A consultative meeting was held with the CEO of NHLS, in September 2010 to establish a working partnership with the NHLS. The aim of this meeting was to introduce the USAID TB Program and discuss possible areas of collaboration. The outcome of the meeting was that permission was granted to the project to directly contact the NHLS regional and business managers whenever necessary; this allows direct access and improved collaboration at lower levels. A second meeting was held in KZN on the 26<sup>th</sup> September 2010 with the NHLS KZN regional management to introduce the project. A follow up workshop is being planned where all KZN laboratory managers and USAID TB Program will jointly identify areas of collaboration and develop work plans.

A meeting was held with TOGA laboratories on 3 September 2010 to view their P3 (level 3) TB laboratory and discuss collaboration. TOGA has existing mobile laboratories which are performing HIV related investigations and there is potential for incorporation of TB diagnostics in these. This will improve access to laboratory services in far and remote areas like NC.

A desktop survey of laboratory challenges in the supported districts has been conducted to identify challenges. This information will be used to determine priority areas and develop a work plan. Some of the challenges include: prolonged sputum turnaround time (TAT), cold chain maintenance during transportation of specimens and access to laboratories. In one clinic, Kakamas in the Northern Cape, the challenge of specimens leakage on transit was alarming, out of 10 sputa collected 7 leaked. The clinic is attached to a hospital with no laboratory on site and the nearest laboratory is 150 Km away. In Zululand district, TAT is long up to a maximum of two weeks. The project staff is working together with the district and NHLS to address some of these challenges. To date, 2 additional microscopists have been appointed in a lab in KZN to reduce work load and improve TAT and 40 SMS printers have been installed in forty facilities which have network signals. The lab is now able to send interim results for smears within 48 hours. The TAT for smears will be closely monitored to assess progress and improvements following these interventions in Zululand district.

The project will undertake to map all TB microscopy diagnostic centers in the whole country. In preparation of this exercise, the Project is compiling a list of laboratories in the supported districts. The details of this exercise will be reported in the next quarter.

### **3.2.2.4 Drug Resistant TB management**

The TB Program has been involved with assisting provinces with the initial steps towards implementation of the national decentralized model for the management of MDR TB. Sites for initial implementation of decentralized management of MDR TB have been identified in North West, Limpopo, KwaZulu-Natal and Eastern Cape provinces. The initial activity will include mapping of the MDR TB cases using a GIS system so that areas with a high number of cases can be identified and appropriate interventions put in place.

During the national civil servants strike action, the project assisted the DoH in the EC province to manage prematurely discharged M(X) DR TB patients in Amathole district:

- Compilation of the database for all discharged M/XDR TB patients highlighting the injections patients are receiving

- Mapping of clients by sub-district and geographical location for easy tracing and tracking
- Assigning patients to USAID TB Program facility coordinators within their catchment areas in order to administer the injections daily and complete the relevant documentation
- The USAID TB Program provided daily injections to a total of 20 M/XDR TB patients at Amathole district (Buffalo City and Amahlathi sub-district)

Subsequently to these interventions, a follow up meeting was convened to discuss down referral of M/XDR -TB patients from M/XDR-TB hospitals to satellite centers and continued management of patients in the community by the newly established injection teams. The assistance provided by the USAID TB Program was acknowledged in writing by the District Manager of NMBM.

### **3.2.3 Increased demand for TB Treatment**

In this last quarter, a second call for proposals to receive small grants to expand community based TB management was issued under the grants program, which attracted over 90 proposals. In this financial year, 20 small grants were awarded to different organizations across all nine provinces. To date over 1,000 industry workers and shift supervisors have been trained on TB infection control in the work place, 100 teachers trained on symptoms and signs of TB through these supported grants. School TB activation campaigns commenced in 3 provinces in collaboration with the NTCP's KICK TB campaign. 820 school children were reached. Two PSAs were released on national television and radio in this quarter, one on infection control and another on TB treatment adherence. Community dialogues around this media communication will be conducted in all project supported districts as outlined in the activity narrative below.

#### **3.2.3.1 PPM Seminar in Durban, KwaZulu-Natal**

The Project together with the National Department of Health organized a successful PPM Seminar on the 27<sup>th</sup> -29<sup>th</sup> August in Durban, KZN. The Seminar was supported by the MEC for Health in KZN, Dr Sibongiseni Dhlomo who gave the key note address on the opening day. The seminar was also supported by the WHO country representative, Dr Stella Anyangwe who was one of the speakers, the NTCP Chief Director, Mr David Mametja and the TB provincial management of KZN and Eastern Cape. In attendance were various directorates in the National Department of Health involved in the TB, HIV and AIDS programmers, Private Medical Practitioners in KwaZulu-Natal involved in the delivery of care for TB and HIV patients.

The objectives of the seminar were as follows:

- Improved management support systems to provide a platform to discuss opportunities and challenges for scaling up the implementation of Public Private Partnerships in TB Services

- Discuss various approaches to involve private providers in the delivery of TB services
- Share lessons from other PPM interventions in other countries and in Region
- Discuss how to improve collaboration between the DOH and Private Providers

More than 160 delegates attended the Seminar, as a follow up to the seminar; the Project will conduct a survey of TB and TBHIV services provided in the private sector, targeting general practitioners initially and private companies with the aim of establishing a PPM model for the two entities.

### **3.2.4 Improved management support systems**

Strengthening of TB information system is ongoing, with the intervention started in NMBM in May having resulted in 100% timely data submission by facilities and improved quality of ETR data. A similar intervention was conducted in Waterberg district which was combined with operations research (OR) on management of TB patients not converting after 2 months of treatment. This quick survey identified a key gap in the implementation of NTCP guidelines, in that culture and DST is not regularly performed on these patients.

The project has selected 50 facilities that will be visited regularly and closely monitored as “champion” facilities. In these facilities data analysis will be done by the facility and improvement plans developed and implemented quarterly.

Clinic data validation exercises were also conducted in North West and KwaZulu Natal to identify discrepancies and inconsistencies in the TB and TBHIV data. Selected facility ETR data was reviewed and compared with clinic register data for validity and accuracy.

The TB Program is still faced with challenges around good patient record keeping, timely reporting of data, validation and interpretation of collated data. There are specific activities by the project staff at district, sub district and facility levels aimed at improving TB Information management systems. Support visits are conducted to selected facilities to identify challenges around TB monitoring and evaluation systems and necessary support is provided. One of the major challenges identified in the last quarter was the backlog of data, specifically in Dr Kenneth Kaunda, Mafikeng in Ngaka Modiri Molema (North West) and Amathole (Eastern Cape); part time data captureurs were employed to improve the back logs. Data quality audits were conducted in EThekweni (KwaZulu-Natal), Dr Kenneth Kaunda, (North West) and NMBM (Eastern Cape).

In Nelson Mandela Bay Metro, the USAID TB Program together with DOH and other partners initiated a project to review the challenges of data management in the district which lead to an appointment of 6 additional Data Captures. The impact of this intervention yielded good results and also highlighted challenges such as poor recording, poor supervision and failure to update ETR when facilities are updating the paper based facility TB registers. All the data for the quarter has been captured but data ‘cleaning’ is continuing. Cure rates improved from 53.9% before capturing to 61.3% after capturing in Q1 2009. The 6 Data Captureurs have now been employed permanently by the DoH. In Rosedale CHC, the facility coordinators assisted health care workers who were calculating the sputum turn around time (TAT) incorrectly which led to an improved TAT. In Matlosana sub district staff was assisted

to understand how to conduct cohort analysis in the case identification and follow up register as well as the TB register.

Facility Data Validation Exercise in Limpopo, Waterberg and NW, Ramotshiri Moilwa:

Waterberg: Clinic data validation exercises were conducted in selected facilities in 2 subdistricts, out of the 67 facilities in the sub-districts, the district ETR data check results showed a need for data validation, verification and alignment in the following clinics:

Mookgopong clinic in Mookgopong Sub-district, Rebone CHC, Bavaria, Mapela and Sekgakgapeng clinics in Mogalakwena sub-district.

NW: Four facilities were visited for data validation; this process was slow as patient's treatment cards were missing and time consuming to search for cards to confirm results recorded in the TB register.

The validation exercises were conducted jointly by the USAID TB Project coordinators and DoH staff. ETR reports were discussed and all facility TB records, (Case Identification Register, TB Register, patient clinic files, and ETR) were reviewed. Information was aligned in all these documents after a thorough verification and validation.

**Common Key findings from the data validation exercise included the following:**

- The data on the paper based register is consistent with that on the ETR but there were some discrepancies
- The date the results were received from the laboratory was recorded as the conversion date rather than the date the sputum was collected from the patient
- Some patients appeared in the ETR as belonging to the facilities but could not be found in the facility TB Registers

**Case Identification and Follow up register:**

- Treatment start dates was not recorded in the register in spite of continuous and repeated training of the staff
- Case detection indicators are not used by the facilities. Suspect rate is not routinely calculated and the staff is not aware of their facilities performance

**TB Register:**

- Smear conversion results are recorded in the patient clinic files and not in the TB Register
- Culture and DST collection dates not recorded in the register. Staff wait for the results before recording making it difficult to tell which patients await Culture and DST outcomes, therefore no follow up is done if the lab does not deliver on time

**Patient Clinic File:**

- Contacts are only listed, there is no indication of the investigations or follow up done
- Clinic files of patients treated and discharged in Q1/10 to date did not reflect outcomes

**Interventions:**

In spite of numerous trainings conducted, staff was still challenged with TB recording and reporting. It was agreed that two trainings on TB Recording and Reporting systems will be conducted; it was emphasized that this should be followed up by staff mentoring by the TB coordinators. It was recommended that the facility needs to be supported closely and a follow up visit is planned.

**Supervision and Surveillance:**

Supervision of the TB Program is not standardized nor regular which compromises the assimilation and providing proper guidance in applying knowledge gained during the numerous trainings.

The quarterly Supervisory District rapid Assessment Tool (DRAT) is successfully institutionalized in the Eastern Cape and the DRAT is initiated and organized by the Province with the Project offering support. The facilities develop facility based improvement plans based on the challenges identified during DRAT supervisory rounds. Monthly follow up in facilities is conducted by the USAID TB Project through facility coordinators who monitor implementation of improvement plans in URC supported facilities.

**3.2.5 Small Grants Management Program**

The small grants program forms a significant element of the USAID TB PROGRAM SOUTH AFRICA with just under 40% of the project funds for October 2009 to September 2010 allocated towards it. It is designed to help increase the demand and availability of TB and TB/HIV services by awarding a number of small grants to South African community, universities and research organizations. The rationale for the small grants program is to implement community-based strategies that will identify TB suspects and ensure early referrals for testing and treatment. Building community-based support also ensures treatment adherence by patients and reduction of stigma and discrimination and also creates demand for improved services for TB-HIV co-infected people.

In this financial year two Requests for Applications (RFAs) to support the program were issued to formally compete small grants and select grantees to implement interventions that strengthen DOTS including the following activities:

- TB case detection,
- active case finding
- follow up of TB cases
- prevention of MDR TB
- integration/expansion of TB into HIV services (implementation of 3Is)
- public-private mix (PPM) DOTS

- improving access and quality of laboratory services and social mobilization in South Africa

To date 20 organizations have been awarded 12 month contracts (Table 3).The selection process for the second wave which was advertised this quarter is still ongoing.

**Table 3: Distribution of Small Grants**

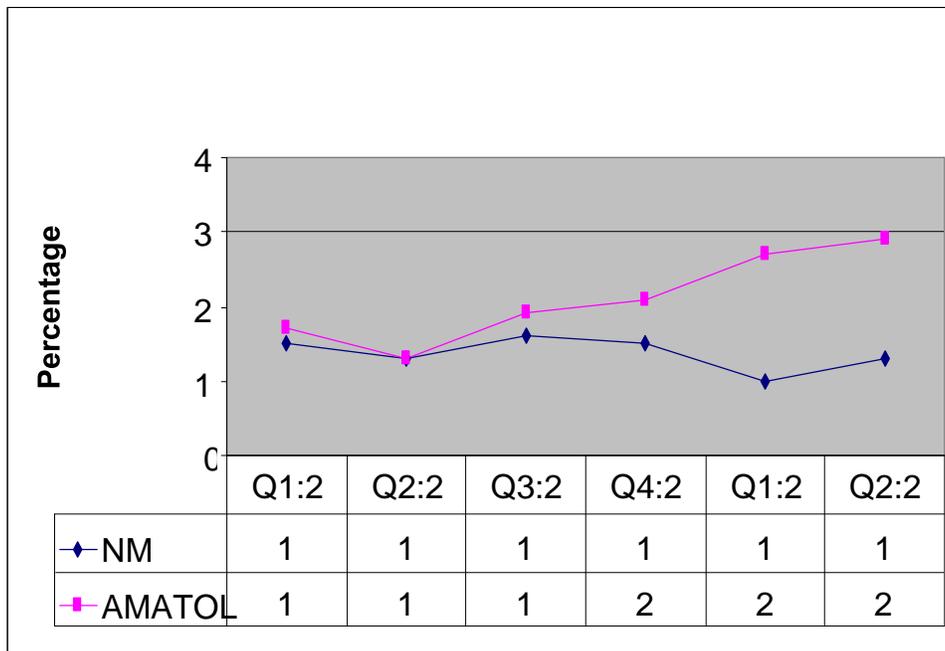
<b>S.No.</b>	<b>NAME OF GRANTEES</b>
1	Denovo Communications - Eastern Cape
2	Medical Care Development International
3	Perinatal HIV Research Unit
4	Curious Pictures
5	South Africa Clothing and Textile Worker's Union
6	Aurum Institute for Health Research - FS
7	Desmond Tutu TB Centre - Stellenbosch
8	Humana People to People
9	Operation Hunger
10	South Africa Catholic Bishop's Conference
11	Siyaphila Youth Support Services
12	Philanjalo Home Based Care Support Program
13	Aurum Institute for Health Research - DCS
14	Medical Care Development International (New)
15	TB HIV Care Association
16	Mediology
17	Kadimah Trading Corporation
18	Events Solution
19	Reach for Life
20	Namakwaland Development Foundation

## 4 PROVINCIAL RESULTS

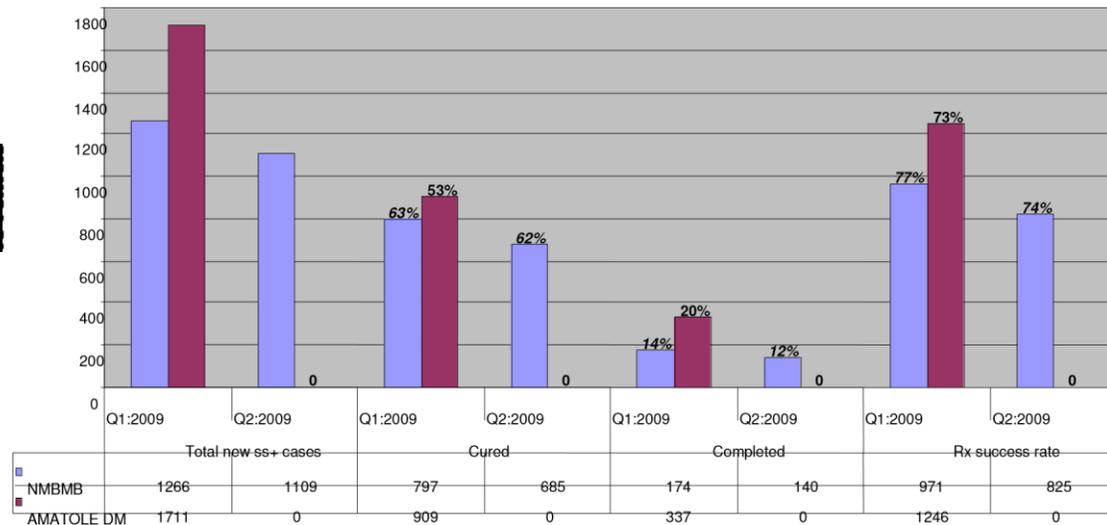
### 4.1 Eastern Cape

The two supported districts have the highest TB case loads within the province, together reporting estimated 7000 TB cases per quarter, with an estimated 1500 smear positive PTB cases. PTB diagnosed without smears are still high especially in Amathole at more than 25%; NMBMM is starting to show improvements following extensive involvement of the private sector through the PPM project as well as training of doctors in the hospitals. Facilities are also encouraged to collect sputum from all PTB patients referred without one from the hospitals. In this year 1831 health care workers were trained, 1123 on TB and MDRTB; 708 trained on TBHIV. Successful treatment and cure rates have improved significantly over the past 5 years in both districts, at more than 70% and cure rates more than 60%. This is still well below national targets. Key challenge in NMBM is the high % defaulters 9% and increased Retreatment cases; Amathole has increased defaulters 10% and the death rate also 10%. The death rate in NMBM has been reduced as TBHIV integration improved, 90% TB tested for HIV and more than 75% HIV screen for TB.

**FIGURE 15: Smears not Done Jan - June**



**Figure 16- Cure, completion and treatment success rates for new ss+ cases at Eastern Cape from Jan to Jun 2009**



## 4.2 Limpopo

Although two districts are allocated to the project, implementation has started in only one, Waterberg district. Challenges with management in Sekhukhune district have prevented any progress with implementation.

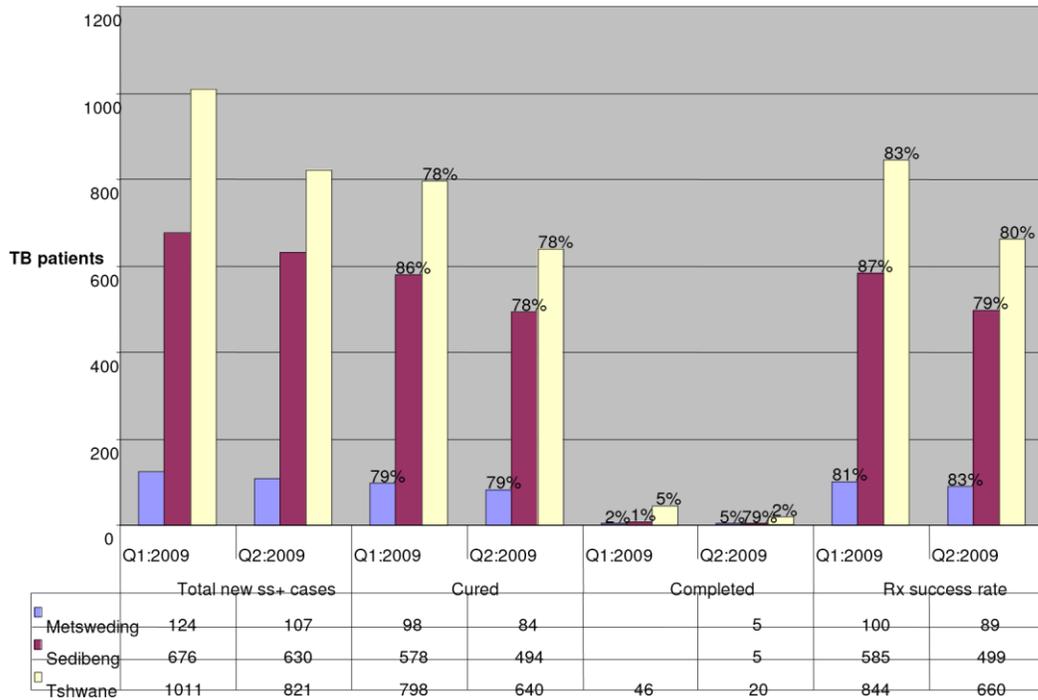
Waterberg: Regular data management workshops have improved outcomes. TB/HIV co-infection management has also improved with 80% of facilities having sustained an uptake of CPT at 90% for three quarters. Introduction of TB case identification registers at George Masebe Hospital has improved bacteriological coverage from 51% – 77% in 2 quarters. Cure rates has improved from 53% – 72% end Q2/09. Initial defaulters reduced to less than 2% from 8 – 11%.

Major challenge was patients remaining smear positive at the end of intensive phase of treatment. A quick survey was conducted, results attached as appendix.

## 4.3 Gauteng

Improved quality: The 3 districts supported in this province generally have good TB treatment outcomes with successful treatment at 80% and cure rates of more than 75%, as shown in the graph below.

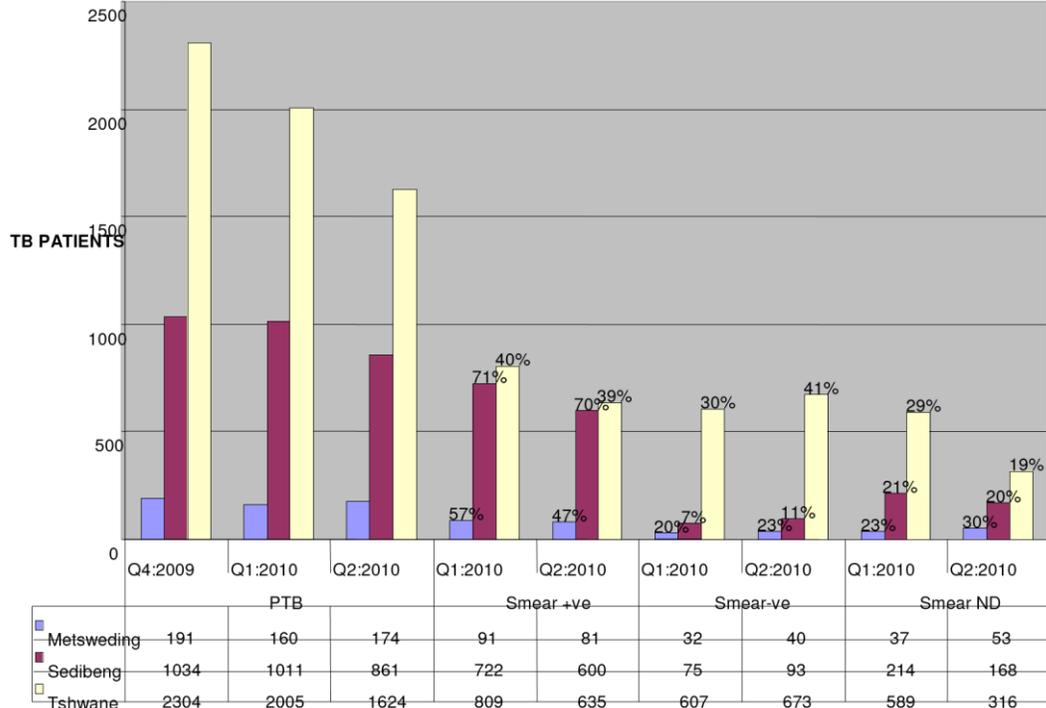
**Figure 17- Cure, Completion & Treatment success rates for new ss+ cases from Jan to Jun 2009**



2  
7

The main three key challenges on which project interventions are focused in these districts are; Hospital doctors non-compliance with national guidelines in the diagnosis of TB resulting in more than 20% PTB cases diagnosed without a smear as shown in the graph below; defaulter rates more than 8% and poor TBHIV integration. Data for TBHIV activities is not readily available in the districts.

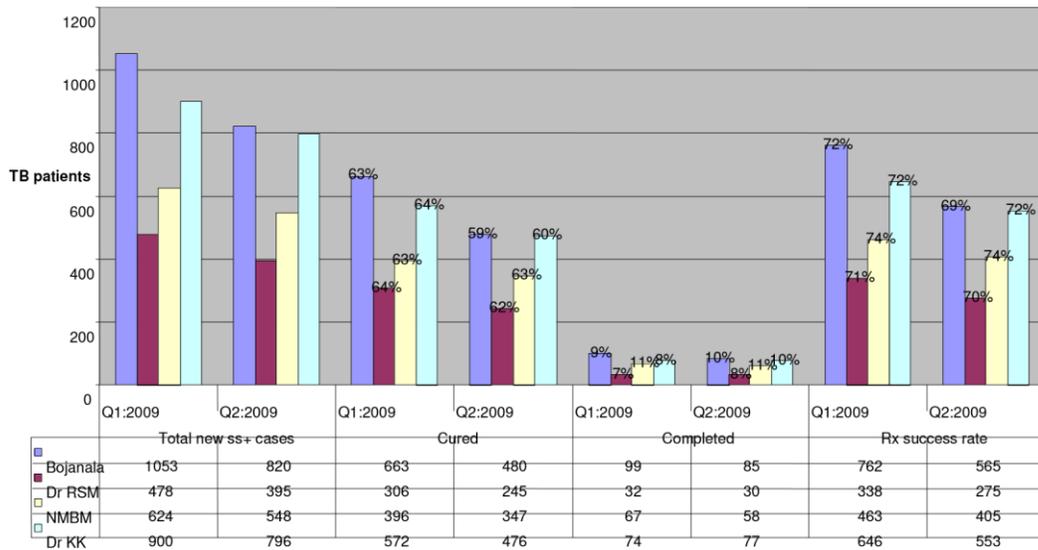
**Figure 18 - TB CASE FINDING REPORT FOR GAUTENG PROVINCE (DATA FOR 3 DISTRICTS) FROM OCT 2009 - MARCH 2010**



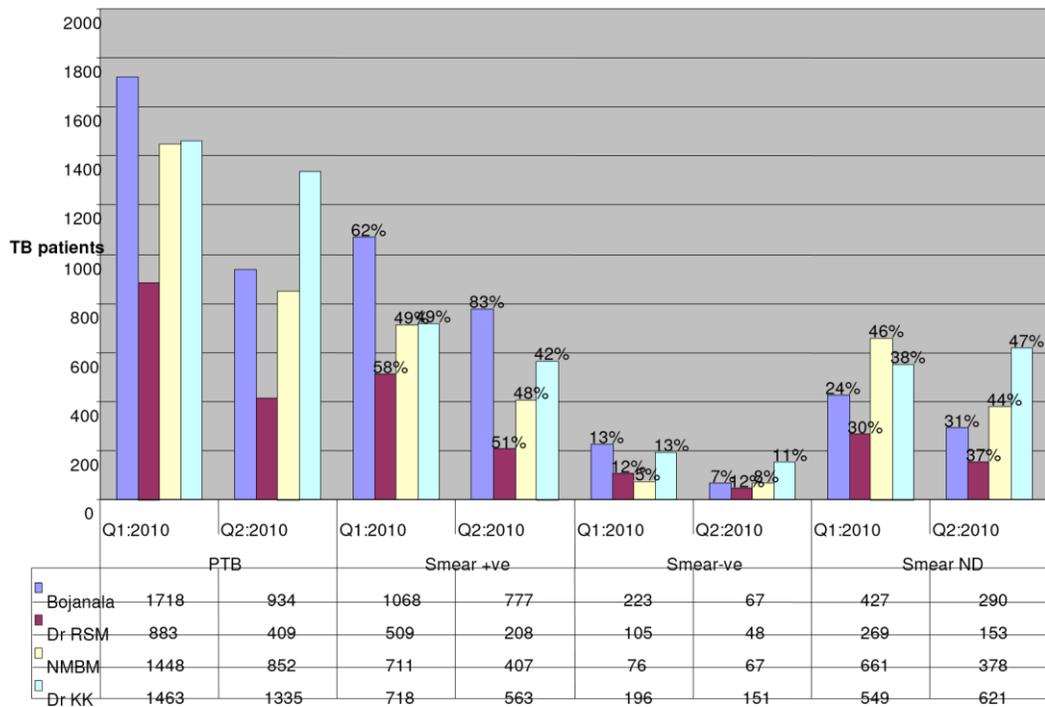
#### 4.4 North West

The four districts supported are still struggling with DOTS implementation of the program. Data backlogs are frequent. Non-compliance with national guidelines is common in the hospitals. PTB diagnosed without smear more than 35% of cases. The area has a lot of platinum mines and the population is therefore highly mobile in some of the districts and the death rate and defaulter rates are high at 10% and 9% respectively. TB/HIV co infection rates in Dr KK district are at 76%.

**Figure 19 -Cure, completion & Treatment success rates for North West from Jan to Jun 2009**

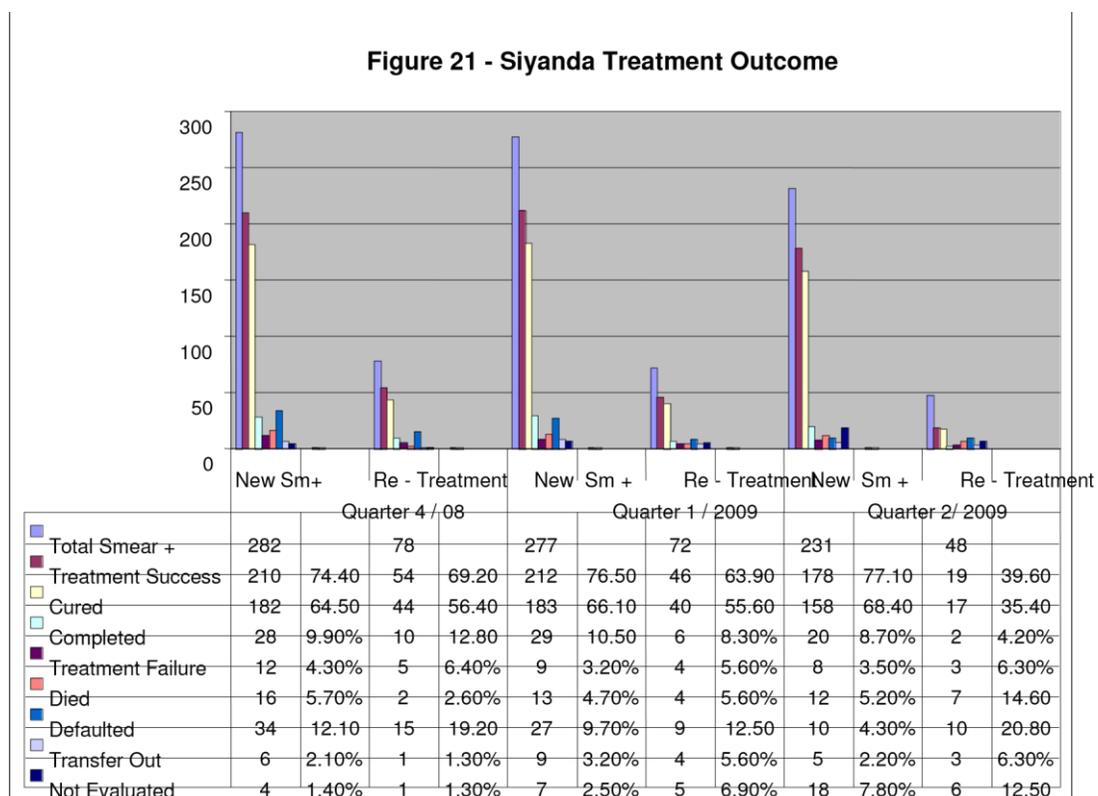


**Figure 20 - TB case finding report for North West from Jan to Jun 2010**



## 4.5 Northern Cape

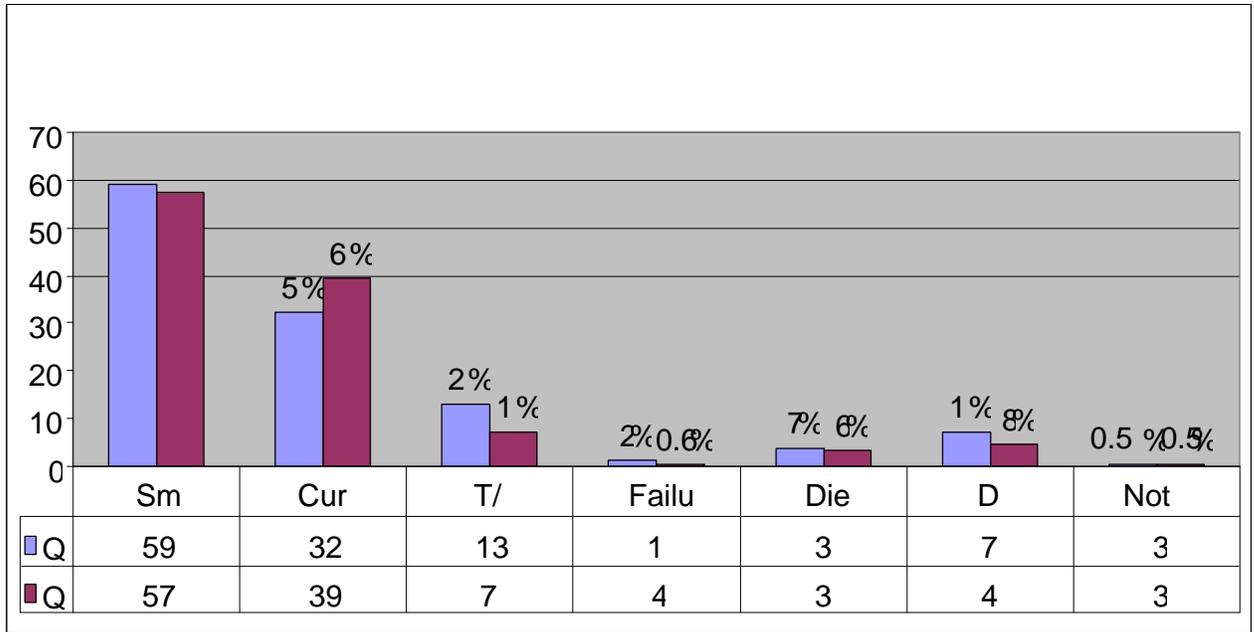
### Figure 21: Siyanda Treatment Outcome



## 4.6 KwaZulu Natal

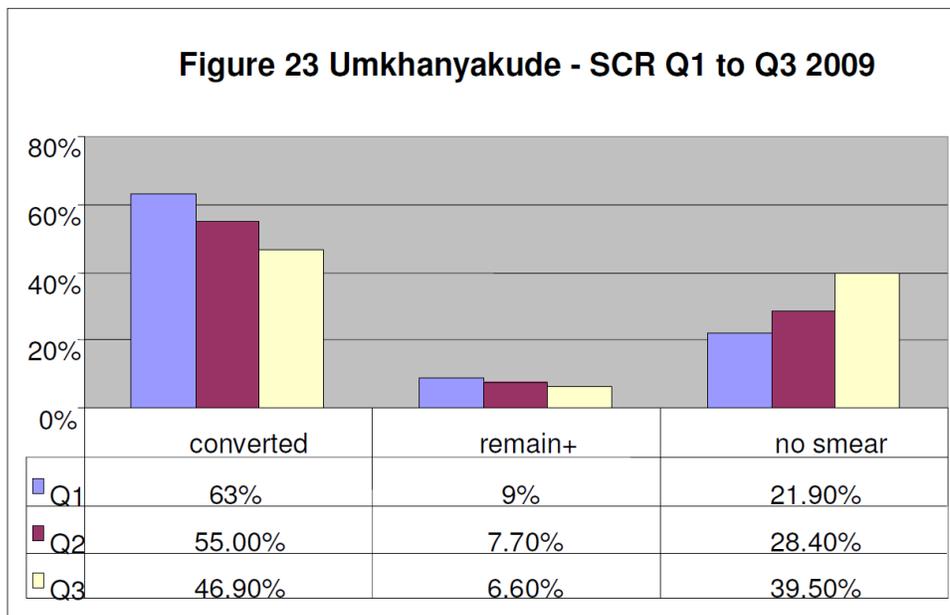
Four districts are supported by the project. EThekweni: Annual case load 43,000, PTB rate of 85%. Annual smear positives 14,000 (38%). Through project interventions, treatment success rates in the worst performing sub-districts, South and West, have improved to 81% and 74% respectively. There has been a reduction in smears not collected at diagnosis in South from 50% to 28%, cases not evaluated almost eliminated at less than 1%. Improved CPT uptake to 80%. This district is the better performing out of all 4.

**Figure 22: Treatment Outcome Report New PTB Q1&2-10 for EThekweni South Sub-district**

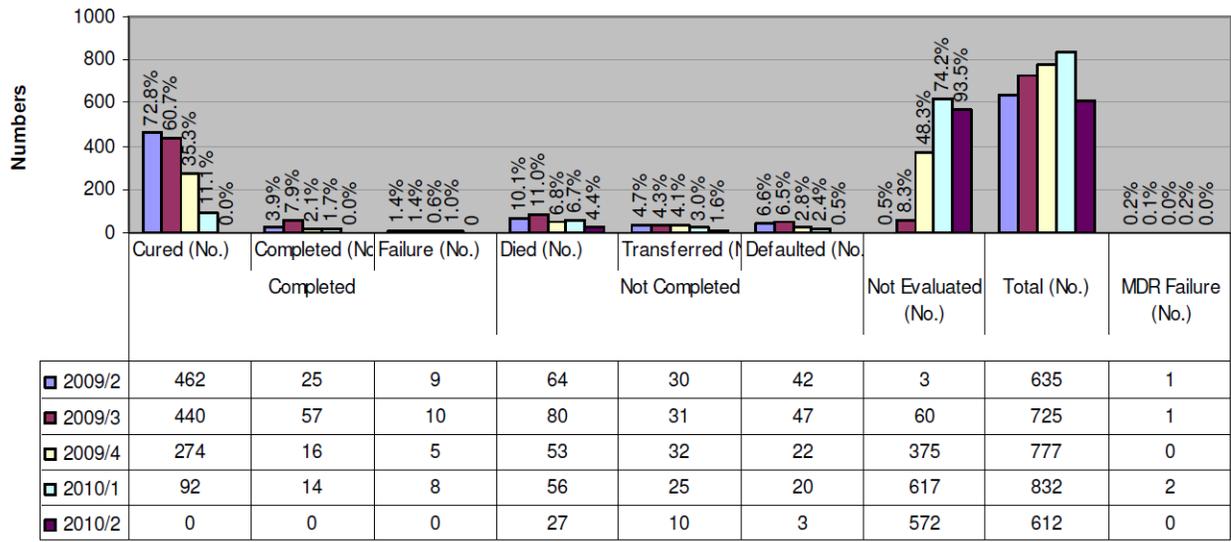


The TB Program in UMGungundlovu, uMkhanyakude and Zululand is still very poor. There is poor clinical management and major challenges with data management.

**UMkhanyakude SCR Q1 to Q3 2009**



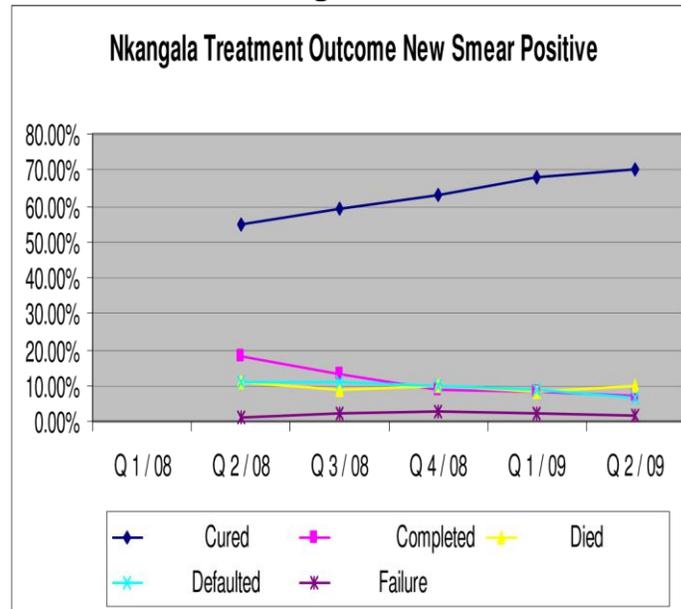
**Figure 24: uMgungundlovu TO Q2/09 – Q2/10**



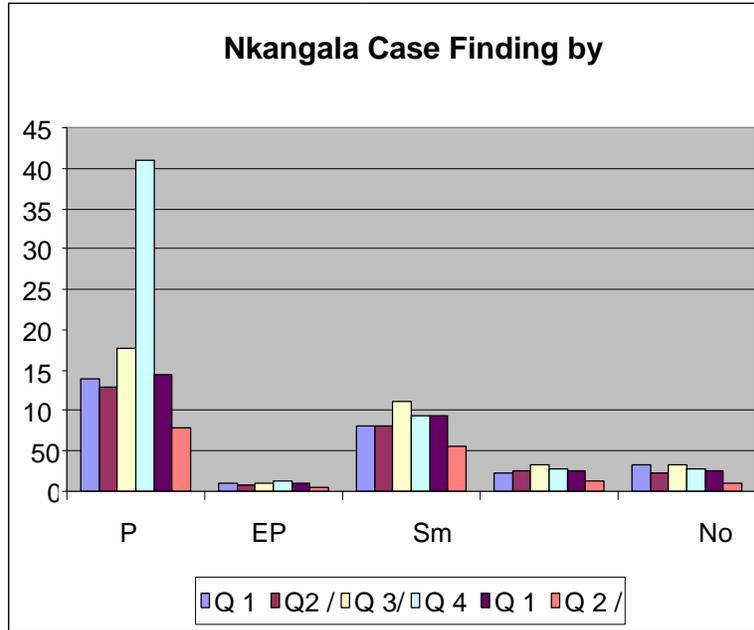
**4.7 Mpumalanga**

Two districts are supported.

**Figure 25**



**Figure 26**



## 5 CHALLENGES

### 5.1 Implementation challenges and Problem resolution

Implementation of the project's activities started in earnest between April –June as Jan to March was the end of the provinces' financial year and the Minister's campaigns and policy changes were starting in the provinces

The World Cup 2010 welcomed by the whole country as a successful event nonetheless affected the activities as long distance travelling was suspended during June and July 2010.

The 6 week long Public Sector strike

The National Public workers strike derailed a number of Project activities in all the districts, activities which were planned had to be cancelled.

For as long as 3 weeks, health care facilities in all districts were no go zones; hence the support visits and other activities could not be performed during this period. The Project was able to assist the National Department of Health to alleviate the impact of the industrial action among TB patients by assisting patients to get their TB medication through various means and in some areas performing clinical work in the TB wards. In Amathole and NMBM (Eastern Cape), provincial staff assisted the Provincial TB Directorate by conducting home visits to MDR-TB patients who were given pass out during the industrial action by administered the daily injectables in the homes of MDR-TB patients in URC and non-URC supported facilities.

All postponed trainings in the provinces have been rescheduled to take place in the last quarter of the FY, and the Project managed to reach the USAID targets.

Management Information Systems: Poor recording and reporting: CD4 results for TB patients, patients referred for ARV'S, patients receiving treatment (DOTS) at community level. Challenges with the national TB information system (ETR) are contributing to poor data quality making it difficult to adequately monitor progress and improvements in the supported districts.

In newly supported districts there are problems with accessing TB data and resistance from the coordinators to make data available.

The project plans to conduct in service training for all project staff during the upcoming quarterly meeting for all staff in the districts and at national to be able to generate electronic reports per district and per province.

Onsite training at facility level were conducted to improve recording and ETR Update during the monthly district support visit; on site mentoring on quarterly cohort analysis was also initiated

Weak communication systems between the sub district coordinators, municipal supervisors and facility managers in all sub districts visited such as holding regular meetings for feed back to discuss challenges and opportunities on TB management.

The project will discuss data feedbacks during the visits and conduct data management exercises in Mpumalanga and Northern Cape.

Patients' management: All the supported districts report a high rate of PTB diagnosed without smear (especially Zululand- 10% amongst new smear positive cases and 26% amongst retreatment cases- and the whole North West Province).

Provinces have challenges in retaining and replacing staff, especially in the TB program, leading to community DOT supervisors managing the patients.

Contact tracing: It remains a challenge in MP, NW and Limpopo; provinces delay in implementing tracing teams and in MP for instance, tracing is conducted by Home Based Carers.

The USAID TB Program identified sub districts with a lack of contact and defaulter tracing systems; through the small grants project, local NGOs will assist with these activities in areas in need.

Implementation of the Three Is: ICF: Screening for HIV positive patients for TB is still a challenge. This is due to unavailability of tools. There is a need for reinforced support and increased mentorship by the project. TB screening tools were supplied and the importance of the use of the screening tool was reinforced to health care staff including lay counselors. Monitoring of the TB screening tool will be done during monthly supervisory visits.

IPT: Limited training of health care workers and unavailability of INH at facility level resulted in slow implementation of IPT.

Amalgamated Pharmaceuticals, the pharmaceutical that manufactures the supplied INH was contacted about these stock outs; we were informed that the drug is in stock, but facilities were advised to order in a new order form supplied by the pharmaceutical depot. Sub-district coordinators, facility managers in all TBHIV facilities, municipal facilities and hospital pharmacists were informed on this new procedure.

Infection Control: Limited implementation of infection control measures in facilities where the risk assessments were conducted. Many of the facilities are yet to draw up Infection Control Plans.

The TB Program plans to follow up with senior district and sub-district management to gain support and buy in at district level on the implementation of infection control measures recommended in the risk assessments.

## 6 BEST PRACTICES/SUCCESS STORIES

### 6.1 Compelling individual-level success stories

**Title:** A support system for a MDR TB patient refusing to continue with MDR TB treatment at Ext 8 clinic in Steve Tshwete, Nkangala District

**Introduction:** Steve Tshwete sub-district in Nkangala district with a catchment population of 205 650, predominantly farming area with large industries, mostly power stations, coal mines and a large stainless steel factory. 21% of the population is rural and the remaining 79% urbanized. Extension 8 clinics is one of the 6 municipal facilities in Steve Tshwete subdistrict, with a catchment population of 8 547. The TB attends between 40 to 50 TB patients daily with a staff complement of 3 Professional nurses, 2 lay counselors 1 admin clerk and 1 general assistant.

During a supervisory visit together with the Sub-district coordinator, the TB focal nurse and the facility manager reported an MDR-TB patient who was discharged from the TB specialized hospital to continue treatment at Extension 8 clinic who is refusing to come to continue with treatment. The patient, who is a teacher, did not want to continue with the Amikacin injection after five months of taking the injection. The TB focal nurse and the facility manager tried to counsel and pleaded with the patient to continue treatment with no success.

**Interventions by the USAID TB Program:** The USAID TB Coordinator called the patient and arranged a meeting where the coordinator educated the patient about MDR TB, the importance of taking treatment, side effects of medication, and the risk of transmitting the disease to family members at work, colleagues and students at work. The patient was given reference of other patients who had MDR TB and completed treatment.

The treating doctor at the TB hospital was consulted and informed of the patient, it was advised that the injection be given alternate days. This was communicated to the patient and the patient was reassured and promised to be provided with analgesics to alleviate the pain. The patient agreed to come to the clinic, the USAID TB coordinator went to meet the patient at the clinic on the agreed date; unfortunately, the patient did not show up and was not answering her phone. After several attempts, the coordinator called the patient who explained that she could not make it to the clinic and agreed to come on another day.

On the agreed date, the USAID TB Program coordinator called the facility manager to find out if the patient arrived at the facility. The manager reported that the patient did not show up. The USAID TB Program coordinator phoned the patient to stress the importance of getting back to treatment and the support she will receive, she promised once again to report to the clinic. Later the USAID TB Program coordinator called the facility manager who reported that the patient arrived and agreed to continue with other treatment except for the injection that she got for five months already and cannot tolerate it any longer.

**Conclusion:** The patient after thorough counseling by USAID TB Program Coordinator eventually agreed to continue with MDR TB treatment. The facility manager and TB focal nurse appreciated the USAID TB Coordinator's intervention and immediately ordered the

patient's treatment. The Sub-district coordinator was informed, the patient expressed appreciation of the support provided. She mentioned that she already concluded that she was not going to continue with treatment as it has been too long and that is disturbing her concentration as she is pursuing her studies. The following week the USAID TB Coordinator checked on the patient to find out if everything was still fine with her. She appreciated the call and reported feeling much better and still taking treatment. The coordinator continues to cancel the patient telephonically to adhere to treatment.

## **6.2 Documentation of better practices that can be replicated or taken to scale**

### **Door to door campaign in Ward 45, NMBM, and Eastern Cape**

The USAID TB Program conducted training on TB/HIV in April to Ward councilors in NMBM. During the training, it was agreed that participants should implement some activities they were trained on such as tracing of defaulters before certificates are issued.

Following the training, a door to door campaign was conducted in Ward 45 with participants comprised of Public Health Officials, Provincial management, SAID TB Provincial and Facility Coordinators, volunteers and members from the Health Sub-committee.

Six groups were formed and each group had Councilors and provincial officials to assist volunteers.

- Each group had a team leader who kept a recorded all houses visited and problems identified. In total, 210 Households were visited and 600 people were reached
- TB-HIV pamphlets were distributed in local language

**Findings:** More than 50 TB defaulters were traced back to the clinics, some gave wrong addresses. Some of the problems identified included, transport problem for patients with difficulties to walk due to other ailments such as stroke, quite a number of children contacts were found and need follow up and screening to exclude TB.

#### **Socio-economic challenges:**

- High unemployment rate
- About 90% of the household depend on social grants and almost all small children were receiving child support grant sometimes 3 kids in 1 house
- Lack of income generating projects
- Alcohol and substance abuse
- 2 families with extreme poverty no income and home condition very poor
- Problem of money loan sharks
- Many children look after by grand parents

**Education:** Most Children were not in school and youth out of school

**Housing:** overcrowding and bad condition of the houses with little chance of practicing Infection Control.

**Recommendations:**

- Nutrition department to be invited to support community gardens
- Follow up to the homes where health problems and TB suspects were identified
- A list of 60 volunteers requested to be trained in TB and HIV by USAID TB Programme and TB Free
- To conduct more door to door according to ACSM district plan

