



TUBERCULOSIS SOUTH AFRICA PROJECT

USAID TB South Africa Project (TBSAP)

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Prepared by:

University Research Co., LLC

Submitted by:

Refiloe Matji

Acting Chief of Party

RefiloeM@urc-sa.com

Submitted to:

Nellie Gqwaru

Senior Technical Advisor: TB and TB/HIV

USAID/ Southern Africa: Health Office

Telephone: +27-12-452-2237

Fax: +27-12-424-0462

Mobile: +27-83-296-4366

<http://southafrica.usaid.gov>

For More Information:

Neeraj Kak, Ph.D.

Senior Vice President

University Research Co., LLC

7200 Wisconsin Ave, Bethesda, MD 20814

Tel: +1-301-941-8626

Cell: +1-240-460-6250

[Web: www.urc-chs.com](http://www.urc-chs.com)

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List of acronyms

ACSM	Advocacy, Communication and Social Mobilization
AFB	Acid Fast Bacilli
AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Therapy
BC	Bacteriological Coverage
CCW	Community Care Workers
CPT	Co-trimoxazole Preventative Therapy
DM	Diabetes Mellitus
DOT	Directly Observed Treatment
DOTS	Directly Observed Treatment, Short Course
DR-TB	Drug-Resistant Tuberculosis
DTTC	Desmond Tutu Tuberculosis Centre
DUT	Durban University of Technology
DVE	Data Verification Exercise
ETR	Electronic Tuberculosis Register
F4L	Footballers for Life
GXP	GeneXpert® MTB/RIF (Xpert)
HCW	Health Care Worker
HIV	Human Immunodeficiency Virus
HOPERSA	Health and Other Services Personnel Trade Union of South Africa
HPCSA	Health Professionals Council of South Africa
IEC	Information, Education and Communication
IPAF	Independent Practitioners Association Foundation
IPC	Infection Prevention and Control
IPT	Isoniazid Preventive Therapy
LTFU	Lost to Follow Up
M&E	Monitoring and Evaluation
MDR-TB	Multi Drug-Resistant Tuberculosis
NDOH	National Department of Health
NGO	Non-Governmental Organization
NHLS	National Health Laboratory Services
NMBM	Nelson Mandela Bay Metro
NTP	National Tuberculosis Control Program
PEPFAR	United States President's Emergency Plan for AIDS Relief

PMDT	Programmatic Management of DR-TB
PPM	Public- Private Mix
PPP	Public-Private Partnership
PSA	Public Service Announcement
PTB	Pulmonary Tuberculosis
QI	Quality Improvement
QIP	Quality Improvement Plans
SABCOHA	South African Business Coalition on Health and AIDS
SC	TB SAP Steering Committee
SCR	Smear Conversion Rate
SS+	Sputum Smear Positive
TAT	Turnaround Time
TB	Tuberculosis
THP	Traditional Health Practitioners
TOT	Training of Trainers
TSR	Treatment Success Rate
UNISA	University of South Africa
URC	University Research Co. LLC.
USAID	United States Agency for International Development
WBOT	Ward-Based Outreach Teams
WHO	World Health Organization
XDR-TB	Extensively Drug-Resistant Tuberculosis

1 INTRODUCTION

The United States Agency for International Development’s (USAID) Tuberculosis South Africa Project (TB SAP), was awarded to University Research Co., LLC (URC) on March 17, 2016, with the primary objective of **providing technical assistance to the Government of South Africa (GoSA) to reduce the burden of tuberculosis (TB) in the country**. The project builds on the activities of the TB Program South Africa (2009–2014) and TB Care II (2014–2015). As shown in TBSAP results framework below, the objectives of the project are to:

- **Reduce TB infections;**
- **Increase sustainability of effective TB response systems; and**
- **Improve care and treatment of vulnerable populations.**

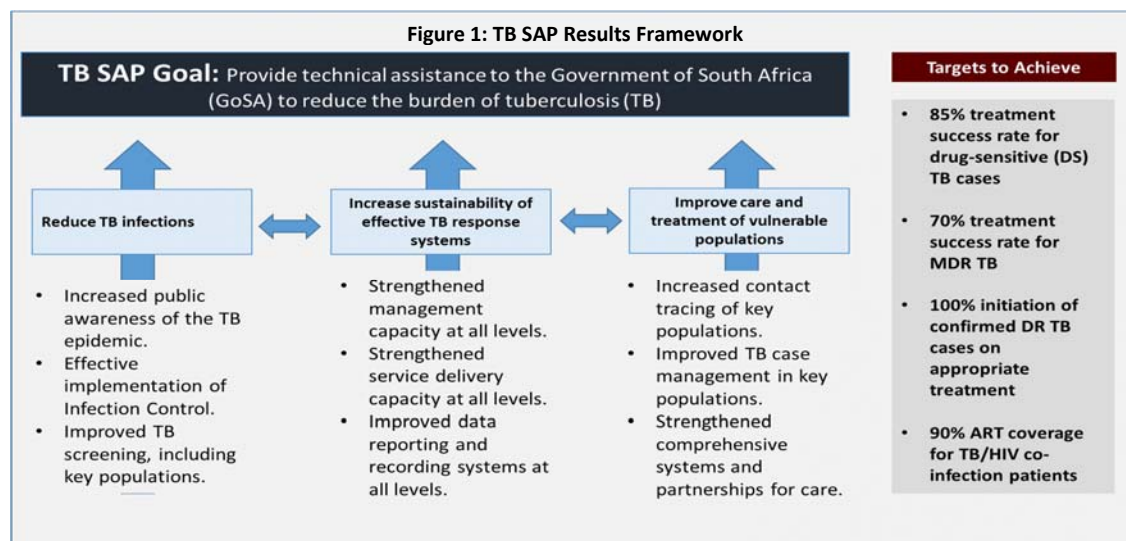
To achieve these objectives, the project will:

- **Promote the End TB strategy – a paradigm shift to a global plan to end TB;**
- **Promote an effective multi-sectorial approach to TB and strengthen of health systems to improve the quality of TB care in South Africa; and**
- **Expand patient-centered care as guided by the ICSM model of care.**

The project will expand access of TB services to key populations, use the NGO network model to strengthen links between NGOs and health facilities to increase TB services reach of providers, scale up innovative mHealth-based system for patient retention, and leverage existing resources from the National Department of Health (NDOH) and other partners. By implementing the above strategies, the project aims to assist the NDOH in achieving the following targets:

- **85% treatment success rate for drug-sensitive (DS) TB cases;**
- **70% treatment success rate for MDR-TB;**
- **100% initiation of confirmed DR-TB cases on appropriate treatment; and**
- **90% ART coverage for TB/HIV co-infected patients.**

These targets will also be aligned to the 90/90/90 targets for TB and HIV, and project activities will be aligned to district-level implementation plans. TB SAP Results Framework is shown in figure 1 below:



This annual report outlines key achievements and activities undertaken by the TBSAP project during the period from March 17 through September 30, 2016.

2 KEY ACHIEVEMENTS DURING THE REPORTING PERIOD

Following project award, TBSAP developed a 90-day work plan to guide initial implementation of the project. The following achievements were accomplished during the first two quarters:

Development of project year one work plan, strategic documents and technical strategies:

The following strategic documents and technical strategies have been developed to date:

- TBSAP work plan;
- Performance monitoring,
- Evaluation and learning plan;
- Environmental mitigation and monitoring plan (EMMP);
- Capacity building plan;
- Advocacy, communication, and social mobilization (ACSM) strategy;
- TB in the mining sector strategy;
- MDR-TB strategy;
- Infection prevention and control (IPC) strategy;
- mHealth strategy;
- Quality improvement strategy;
- Sustainability strategy;
- Strategy for reaching key populations, and
- Project communication strategy.
- Zero TB strategy
- District plans

Selection of project-targeted districts: in partnership with USAID and the NDOH, TBSAP has identified districts to be supported by the project, based on the following criteria:

- High TB disease burden;
- Poor TB clinical outcomes (high mortality rates / high loss-to-follow-up rates);
- Increasing DR-TB burden; and,
- Existence of development partners in the same districts that are focusing on TB (PEPFAR and Global Fund partners).

As shown in table 1 below, TB SAP is currently supporting 23 districts in all nine (9) provinces of South Africa constituting coverage of 32% of the total disease burden in the country. Of the 23 districts targeted by the project, six (6) districts are PEPFAR priority (highlighted in green) and four (4) districts (highlighted in yellow) are scheduled for PEPFAR transitioning out. In all TB SAP focus districts, the project will develop targeted strategies to achieve the goal of the project and to support national and provincial plans. TB SAP team plans to finalize these strategies and districts plans during the next quarter. Some identified districts are still in need of human resources, including: Fezile Dabi in the Free State; John Taolo Gaetsewe, ZF Mgcau and Kuruman in the Northern Cape; Harry Gwala, KwaZulu-Natal; and Nelson Mandela Bay Metro in the Eastern Cape. Figure 2 shows a map with TB SAP supported districts in South Africa. **The project prioritises high burden poor performing districts for intervention, including the introduction of innovative implementation models.**

Table 1: Districts targeted by TB SAP

Province	District
EC	Sarah Baartman
	OR Tambo *NHI district
	Nelson Mandela Bay Metro
FS	Mangaung Metro
	Fezile Dabi
KZN	uMkhanyakude
	Amajuba
	Harry Gwala (formerly Sisonke)
	uThukela
LP	Waterberg
	Vhembe *NHI district
	Sekhukhune
WC	Cape Winelands
	West Coast
MP	Ehlanzeni
	Gert Sibande *NHI district
NC	Namakwa
	Pixley ka Seme
	ZF Mgcawu (formerly Siyanda)
	John Taolo Gaetsewe
NW	Bojanala
	Dr Ruth Segomotsi Mompati
GP	Provincial support
	Zero TB and DR TB in Ekurhuleni and City of Johannesburg for year 1

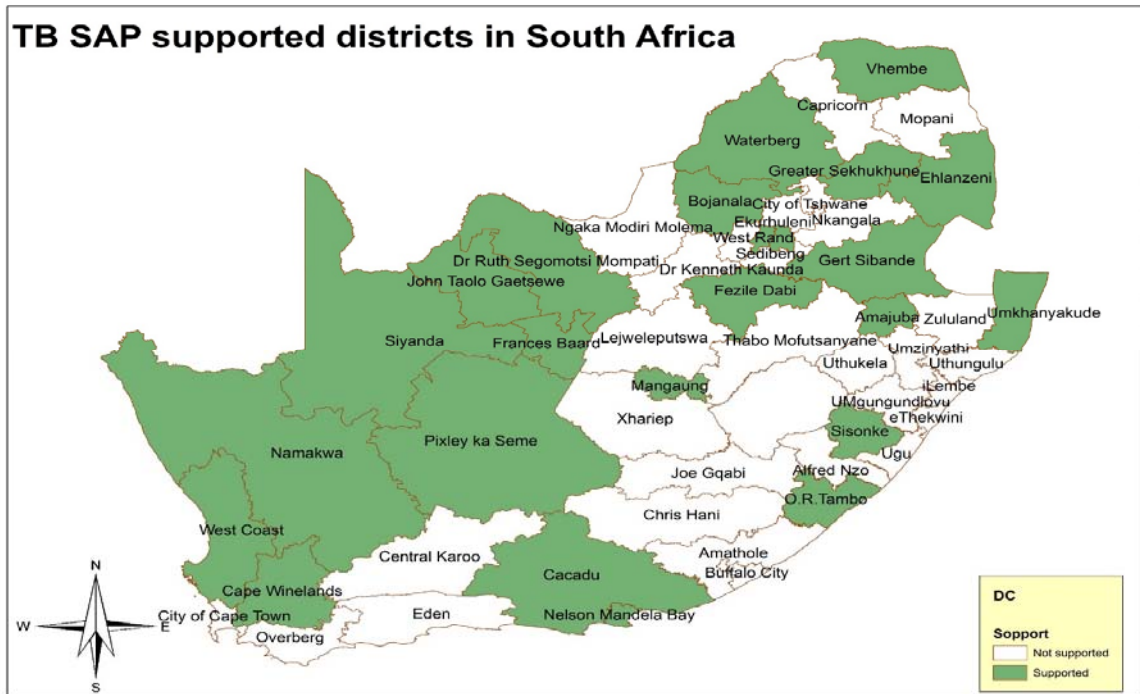


Figure 2: TB SAP supported districts in South Africa.

Successful transition of TB CARE II activities: TBSAP has taken over many activities, including support for small grantees engaged in treatment adherence support for DS/DR-TB patients, from TB CARE II South Africa funding mechanism.

Reducing TB infections: The project continued to support efforts to increase public awareness about the TB epidemic. During the second quarter, the “Tackling TB in Schools Initiative” was continued in KwaZulu-Natal, and scaled up to other provinces including Western Cape, Northern Cape, and North West. The project was also represented at the International AIDS Society (IAS) conference 2016, and its TB pre-conference, TB2016 Conference. The TB SAP supported a campaign to increase TB awareness, taking advantage of the conferences’ location in eThekweni district, KwaZulu-Natal, which has the highest TB burden in the country. The project hosted a fun walk and social media spots to raise community awareness of TB. In addition, the walk was followed by offering TB screening services. Furthermore, the Minister of Health, Dr Aaron Motsoaledi, launched IP-Connect.org.za, an online platform developed by the project that provides infection prevention and control resources for health workers. Districts were identified for FAST (Finding TB cases Actively, Separating safely and Treating effectively) Approach interventions. The FAST Approach interventions will be initiated in the identified districts.

Sustainable and Effective TB Response: The TB SAP focused its first months of implementation on evaluating the TB program management capacity at various levels. The Quality Improvement Methodology (QIM) forms, which are the basis of TB SAP interventions, with training modules have been revised by the project. Additionally, TB SAP partnered with the National Regional Training Centres (RTCs) in KwaZulu-Natal, Mpumalanga, Eastern Cape and Limpopo Provinces.

Care and Treatment of Vulnerable Populations: The project engaged potential partners to explore opportunities for collaboration in addressing challenges posed by TB. Three Non-Governmental Organizations (NGOs) were funded to implement a mHealth-based MDR-TB patient retention tool in Nelson Mandela Bay Metro, Buffalo City Metro and Gert Sibande. Through a selection process guided by the Small Grants Manual, the project shortlisted twenty-two (22) local NGOs to implement community level TB-targeted interventions. Nine (9) local NGOs had their proposals submitted to USAID for approval, and the remainder were being supported to enable their applications to be submitted early in the forthcoming quarter.

The development hypothesis for TB SAP is that a sustainable response to the TB epidemic requires minimizing the transmission of TB, expanding access to TB services, improving the quality of TB services at provincial, district and local levels, and working with both health practitioners and community members to ensure their understanding of, commitment to, and participation in an expanded high-quality TB program. The hypothesis is based on USAID’s past experience in South Africa that evidence-based capacity-building to support the GoSA TB Program has contributed to the adoption of new methodologies and strengthened systems by the National TB Program.

Policy Contributions: TB SAP contributed to policy development through active participation in the National TB Think Tank, South African National AIDS Council, and the National Coalition Against TB. The project contributed to the revision of the National Strategic Plan (NSP), DR-TB Guidelines, and to deliberations on the social protection of TB patients and on the development of the National Occupational Health policy on TB and HIV for Health Care Workers.

Updates on Staffing: TBSAP has successfully staffed all key positions identified in the project proposal except for the Chief of Party (COP). URC has also proposed a candidate for the COP position and is waiting for USAID approval. Majority of non-key positions have been filled. The current staffing complement is attached in **Annex II**.

Small Grants: TBSAP revised the Small Grants Manual used under the TB CARE II and TB Program South Africa Project to incorporate the network model. The revised manual has been approved by USAID and is being used to guide management of small grants to support community-based TB activities. The current grantees under TB SAP include: Ledesma Circle, St. Francis Hospice, and Superhero. All three have signed their agreements and successfully completed the first few months of implementation. The grantees have improved patient retention and adherence support to TB and MDR TB patients in their catchment areas. The project team is currently vetting 22 short-listed NGOs for funding. Nine (9) NGOs had their proposals finalized and submitted to USAID for approval. The remainder are being further reviewed/revised and some of these will be submitted to USAID for approval in late November 2016. TB SAP is also planning to conduct a national level meeting in mid-December 2016 with a select number of short-listed NGOs to help them prepare proposals to receive funding from TB SAP.

Conferences and Social Media: During the reported period, TB SAP has been widely visible at international conferences and meetings. In July 2016, five (5) of TB SAP staff presented papers/posters at the International TB 2016 Conference and two staff presented papers/posters at the International AIDS Conference in Durban, South Africa. Staff will also be attending the Union Lung Conference in Liverpool and present in various sessions about the project results and accomplishments. The project continues to be active on social media through Facebook and Twitter. During the reporting period, the project has reached more than 3 million people with TB messages.

First Steering Committee Meeting: The first TB SAP Steering Committee meeting, chaired by Deputy Director General Dr. Yogan Pillay and Director of Office of Health at USAID, Ms Kerry Pelzman, was held on 21 September 2016. The meeting was conducted at the Civitas Building; National Department of Health. The following Steering Committee members attended the meeting: Mr. Paul Mahanna, Mr. Steven Smith, Ms. Nellie Gqwaru, Ms. Cindy Dlamini, Dr. Peter Barron, Mr. Sicelo Dlamini, Ms. Jacqueline Ngozo, Ms. Nokuthula Sopiseka, Dr Nazir Ismail, Dr. Olarotimi Oladoyinbo, Ms. Blantina Mabelula, and Ms. Patricia Ntsele. From TB SAP team Dr. Refiloe Matji, Dr. Jebson Zingwari, Dr. Robert Makombe, Dr. Siphon Nyathie participated in the meeting. The meeting was opened by Dr. Yogan Pillay and Ms. Kerry Pelzman who stressed that TB SAP needs to identify new innovations and game changers to address the TB challenges in South Africa. The committee reviewed terms of reference (TORs) and accepted the proposal to introduce the project to the National Health Executive Council

(NHEC), as well as the Minister of Health in preparation for the project launch. The meeting discussed key topics such as data reporting, targeted support provided to the districts supported by the project, innovative approaches introduced by the project, coordination and collaboration with other partners and stakeholders, Private Public Partnerships (PPP), gender considerations, support to NDOH and provincial teams to address MDR TB, TB SAP strategies and activities in line with the NSP among others.

The meeting recommended that the project should focus on demonstrating innovative ideas that can be scaled-up to improve the management of TB in South Africa. Based on the steering committee recommendations, TB SAP will conduct cost analysis to demonstrate the cost effectiveness of using various mHealth in the next quarter. Similarly, the project will prioritize key public-private partnerships that can produce high impact in improving TB services. The next Steering Committee meeting will be scheduled in the next three (3) months.

Progress Towards Reaching Project Goals - Monitoring and Evaluation: During the first two quarters of the project, a lot of progress has been made in establishing the team and outlining the action plan for TB SAP. The team developed and calculated indicators to establish baseline numbers for key indicators at the commencement of the project. TB SAP will start reporting on these indicators to track program improvements starting Q1 FY 17. Annex III provides a list of indicators.

Key challenges during this year:

- TB SAP worked closely with NDOH and PDOHs to identify the priority districts. During the first quarter of project implementation, the process of selecting the targeted districts took longer than expected, resulting in a delay in implementation of some activities. Also, project is still in process of finalizing MOUs with the provinces. Start-up activities in these districts may take longer and require more sustained engagement to ensure effective implementation.
- There were delays in accessing drug-sensitive (DS) and drug-resistant (DR) data at district and provincial levels. Thus, the project used data from the previous years to design its interventions. However, data was recently made available for the most current year.

3 ACCOMPLISHMENTS BY INTERMEDIATE RESULTS

The section highlights progress made during the reported period under each Intermediate Result (IR).

IR1: TB INFECTIONS REDUCED

TB SAP's approach to reducing TB infection is in line with National Department of Health (NDOH) as well as World Health Organization (WHO) Infection Prevention and Control (IPC) strategies. TB SAP works to build capacity at the health care facilities to implement, maintain, and monitor IPC measures. This will include administrative, environmental control and personal protective measures. TB SAP works closely with provincial

departments of health (PDOHs) and other stakeholders to strengthen administrative IPC procedures. TB SAP will help the NDOH to strengthen current guidelines and use innovative strategies to disseminate them and to ensure they are implemented at the facility and community levels.

During the reporting period, TB SAP has contributed to TB infection prevention and control measures aimed at supporting uptake of relevant health services and encouraging greater TB treatment adherence among residents of South Africa. During the reporting period, the project undertook the following activities:

1.1 INCREASED PUBLIC AWARENESS OF THE TB EPIDEMIC

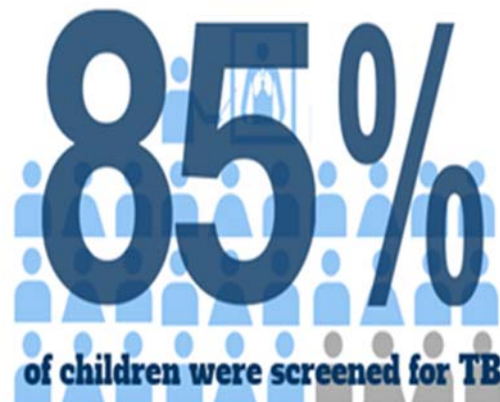
TBSAP continued previous project efforts to build on existing ACSM strategies and focused on impacting patient or presumptive TB cases level behaviours rather than improving general information.

School Activities – KICK TB and HIV Activation Program: The project partnered with the Western Cape Department of Education, TB Alliance, South African Tuberculosis Vaccine Initiative (SATVI), and the Kick TB & HIV Program to bring the KICK TB and HIV activation program to 23 schools in South Africa over a two-week period in May. The program focused on increasing TB and HIV knowledge among teachers and children. The project directly supported seven schools from 24 to 27 May, reaching 6,848 children with IEC materials. Future campaigns in schools will be undertaken in partnership with the provincial department of health to provide screening services.

Childhood TB – Tackling TB in Schools Initiative: Tackling TB in Schools Initiative aims to raise awareness about TB among learners, teachers and caregivers. Through training and sharing of information, teachers are empowered to identify TB symptoms in pupils and take appropriate action by referring them for further investigation. The project supported North West Province in Tackling TB in Schools activities.

Furthermore, work in this area continued in KwaZulu-Natal during the period under review. In total, 83,396 children were reached, and 70,903 (85%) of them screened for TB. The process found that 4,864 (7%) were presumptive and, of these, 89 (2%) were diagnosed with TB and started on treatment, a yield of 125/100,000. Participating children were given tracer cards to use to screen family members for TB at home; 32,118 filled out cards were returned to the school. The children were able to identify 2,724 family members who were presumptive; out of these, 291 (11%) were diagnosed with TB and started

on treatment. This innovative technique of creating TB advocates from schools is a sustainable method of identifying TB in communities. The results from TB school advocates in KwaZulu-Natal hint at an improved approach and perhaps greater buy-in among school



administrators and the students. The initiative achieved a 58% increase in the number of people diagnosed with TB and started on treatment during the period July to September 2016 (170 relatives were diagnosed with TB and put on treatment) compared to period April to June 2016. The project aims to capitalise on these gains by rolling out the initiative in other provinces in the country during the next quarter.

Participation in the international TB and AIDS conferences 2016: The TB SAP was represented at the international TB and HIV conferences, (TB2016 and AIDS 2016), held on 16 and 17 and 18 to 22 July respectively in Durban, KwaZulu-Natal. The event provided an important platform to showcase project work and learn from knowledge and advances in both TB and HIV management. Five posters were presented during TB2016:

- Impact of directly observed treatment (DOT) support offered by local NGOs in Mahikeng, Ngaka Modiri Molema District, North West Province, South Africa between 2013 and 2014.
- Improving the quality of data to improve TB treatment outcomes in Sub District A, Nelson Mandela Bay Health District, Eastern Cape, South Africa.
- Improving TB treatment outcomes in Matlosana and Ventersdorp sub district health facilities in Dr Kenneth Kaunda District from Quarter 3/2009 and Quarter 4/2014.
- Introduction of TB services in correctional facilities in South Africa through a non-governmental organisation.
- Tackling tuberculosis in early childhood development centres in eThekweni Metro, KwaZulu-Natal, South Africa.

Further, two poster presentations were given during the AIDS 2016 Conference:

- A strategic response to TB at work: Call for a public-private-civil society mix in South Africa.
- The role of behaviour change communication in improving community knowledge and practices on TB and HIV in South Africa.

Campaign on multi drug-resistant TB: Buddy Beat TB: Buddy Beat TB (Buddy) is a costumed character that integrates elements of Play Education Therapy to create a companion for in-patient paediatric patients undergoing treatment for MDR-TB.



Pre-testing the Buddy comic book and How-To Guide with in-patient paediatric patients in the Western Cape Province as a necessary step to guide the roll-out of the Buddy package nationally.

Two outputs of the initiative, a comic book and 'how-to' guide were pre-tested with 20 paediatric patients between the ages of eight and 13, and 9 staff members, including caregivers at Brooklyn Chest and Brewelskloof hospitals, both in the Western Cape. Caregivers (doctors, teachers and a provincial officer) were asked to review both the comic and the 'how-to' guide. Key findings included:

- The necessity of reducing the use of technical terminology in the comic book
- That participants were generally happy with the layout of the comic book and recommended its roll-out pending minor changes.

This first of its kind adherence package was implemented in Sizwe Tropical Diseases Hospital, Johannesburg and Brewelskloof Hospital, Worcester, Cape Winelands District (these hospitals have the highest burden of paediatric DR-TB cases in supported districts) as a treatment adherence adjunct.

Additionally, under this initiative, in preparation for the national roll-out of Buddy, one test suit was commissioned for production and completed. Review of the suit will help guide whether another nine suits (one for each province), will be produced using the same vendor. The Buddy suit, accompanied by pillow-sized Buddy toys, a comic book and 'how-to' guide will be rolled out for use with children in hospitals in all nine provinces under the TB SAP as part of initiatives aimed at addressing MDR-TB in children. The new suit is lightweight and has better ventilation, allowing the wearer to breathe better. However, there are some variations in the physical appearance of the new Buddy suit from the original version.

A press release was published on Sunday 11 July 2016 in *The Witness* newspaper, a KwaZulu-Natal paper with a circulation of 134,000 people. There were media interviews given by TB SAP staff. These include discussions on:

- *Lotus FM*, a Durban radio station with a listenership of 3+ million on. The focus of this discussion was announcing the Durban TB Walk and inviting listeners to come out in their numbers to take part.
- *Ukhozi FM*, a Zulu language station with a listenership of +7 million. The interview took place on July 14. TB, and the Durban TB Walk were discussed.

- *Metro FM*, a national radio station with a listenership of 6+ million held an interview on the afternoon of July 14 during the health programme Positive Talk with Chriselda. TB prevention, treatment and management issues were discussed.
- The project gave a second interview on *Lotus FM*, a Durban radio station with a listenership of 3+ million. The focus of this discussion was announcing the Durban TB Walk and inviting listeners to come out in their numbers to take part.



Clients queue to access health services at Gugu Dlamini Park, 15 July 2016

Increase Social Media Engagement: Engaging media audiences using innovative technological platforms, in this case social media, Facebook, through the 'We Beat TB South Africa' page continues to be a key component of the TB SAP communication strategy. During the reporting period, the informative posts by the project reached 440 323 people. Additionally, two requests have been sent via Facebook to include analyses of Buddy Beat TB and the We Beat TB messaging in academic research. While one researcher was interested in the Buddy costume and its use, the other seeks to investigate the impact of the We Beat TB messages disseminated via mass media. Requests such as these indicate that audiences are not only accessing our messages, but also consider them impactful and innovative in increasing awareness about TB.

Most fans and readers of the We Beat TB South Africa page are South African (96.5%), with the majority spread between Johannesburg (22%), Durban (10%), Cape Town (10%) and Pretoria (9%). The page also has fans based in Lesotho (9), the United States of America (6) and Botswana (4) etc. Efforts will be made in the next quarter to increase traffic to the project social media page and gain more fans increasing and improving content posted.

A total of 28 promotional materials were produced during the reporting period (walk banners, teardrop banners, gazebos, x-frame banners, pop-up banners and pull-up banners). Additionally, 10,907 information, education and communication (IEC) materials were successfully produced. A total of 17,826 were disseminated between the period March to September 2016. Of note is that two events for which the project availed materials directly respond to the TB SAP's approach of focusing on key populations as an effective TB eradication strategy. Materials were allocated for disbursement at two events targeting mine employees and mining communities scheduled for October 2016 in the Northern Cape and North West provinces.



Develop a gender mainstreaming strategy for engaging key populations, both in facilities and communities:

Work to develop a gender mainstreaming strategy to guide the implementation of gender-aware and responsive activities began during the reporting period March to September 2016. A framework was developed and is in place, and at the time of reporting, sub-sections on each technical area of TB SAP work were being populated with area-specific information and recommendations.

Further, a baseline assessment of the TB situation and services in farming areas was conducted in the Sarah Baartman District in Eastern Cape Province. This district, with 2,683 farms, is the third highest contributor to the agricultural output of South Africa, and most of its farm workers are seasonal and migrant workers. The findings from the assessment and from planned focus group discussions in selected sub-districts will guide ACSM activities and will inform the development of interventions to address TB in the farms, including the project gender mainstreaming strategy on engaging key populations in facilities and communities.

Develop an inter-sectoral TB awareness communication strategy: Discussions were held with the International Labour Organization (ILO), who are developing a proposal for funding to support activities focused on the transport sector. Proposed interventions include capacity building in the transport sector, review and update of TB policies, and conducting a survey of TB stigma in the transport sector (OR). The findings of the survey will inform the development of an inter-sectoral ACSM strategy.

Support the implementation of an interpersonal communications and counselling package of interventions for both patients and care-givers to improve patient retention and treatment adherence: Following on meetings and discussions started in July 2016, a detailed scope of work was developed and provided to colleagues at the Centre for Communications Impact (CCI) on 15 August to guide their development of a budget and work plan to

implement work under this IR. Pending approval, CCI will be responsible for the implementation of TB SAP interpersonal communications initiatives, covering all nine provinces of South Africa, and all 23 supported districts. Some activities planned include: training district managers in ACSM, working with traditional and community leaders, hosting community activations and visibility-raising activities targeted at reaching identified key populations, and strategic dissemination of printed materials. A first draft work plan and budget were received on 23 September and reviewed. Feedback was given to CCI to review their work plan aligned to the project objectives

Compile database of NGOs by province and in targeted districts, by activity: A database showing NGOs in each province and supported districts was developed using information provided by the provinces. A short-list of 22 NGOs under consideration for funding has been developed for targeted districts, showing the activities to be carried out by each NGO. Targeted TB screening (focused contact management using index TB cases) will be prioritised above massive TB screening campaigns in the transport and construction sectors, e.g., in public transportation vehicles or at taxi ranks and rail stations.

1.2 EFFECTIVE IMPLEMENTATION OF INFECTION PREVENTION AND CONTROL

In the quest to develop an Operational Research (OR) project to test the use of QuantiFERON Gold or other similar tests as they become available to identify people with latent TB infections (HIV, diabetes, etc.) so that could be put on IPT; the TBSAP team met with Prof Beke from the University of Pretoria (UP) and asked UP to prioritize this study in the proposal they are submitting to URC. It is an activity that will begin in the 1st Quarter of 2016/2017 year.

TBSAP developed a TB infection control strategy to address gaps in the current approach to reducing TB infections. The key elements of the TBSAP IPC strategy include use of an integrated approach to capacity building of health care workers, which includes community care givers. In July 2016, the Minister of Health launched IPConnect, a suite of mHealth apps for improving infection prevention and control at the facility and community settings. The use of traditional didactic training of these care providers, complemented by web based training modules. Implementation of IPC guideline recommendations will be evaluated through various implementation models using the FAST approach. The IPC strategy focuses on integrating national IPC guidelines, including national IPC guidelines for home settings. The model of intervention developed for evaluation focuses on use of CO₂ monitors to evaluate environmental control in identified high burden districts (UMkhanyakude, Nelson Mandela Bay Metro and Cape Winelands). The intervention follows a phased approach which includes: district concurrence, identifying 2 high volume PHC facilities per priority district, conducting risk assessments and developing quality improvement plans, capacity development (once off didactic and ongoing low dose high frequency mentorship) and installation of CO₂ monitors in health facilities (including training on SOPs), and quarterly evaluation of implementation of IPC package (including HCW screening). District concurrence has been obtained in all identified sites, facility selection and risk assessments with quality improvement plans are in place. National IPC policies are not very well understood or implemented at facility level requiring an even broader audience for capacity development. The next steps include capacity development and installation of CO₂ monitors with ongoing mentorship and evaluation. The NDOH has developed guidelines for IPC in homes, however this does not include congregate settings. Engagement with the program has been planned to provide technical assistance in

collaboration with other partners and stakeholders at all levels to further improve IPC measure in such settings.

Support NDOH Massive TB Screening Campaign to increase case detection and put more people on treatment: The project supported the NDOH to develop a proposal to secure funding for the second phase of the three-year Massive TB screening Campaign. The proposal was submitted to Jansen during the period under review. Proposed activities will support the implementation of a visible national campaign that combines ACSM activities. The campaign will focus on reaching key populations in the eight metropolitan cities, and will promote the Zero TB Cities Approach. A revised proposal, responding to comments from representatives of Jansen, was re-submitted on September 1. Once this proposal has been approved and funding disbursed, implementation can begin under this tripartite partnership (NDOH, Jansen and TB SAP).

Expand partnerships within government sectors and with other sectors: Discussions were held with the Department of Basic Education (DBE), who are drafting a memorandum of agreement to be signed between TB SAP and the DBE. The project has strengthened its collaboration with the DOH, as a member of national policy and strategic bodies such as the TB Think Tank and the National Coalition Against Tuberculosis, and with the mining industry through establishment and support of the provincial public-private partnership forums in North West and Northern Cape provinces, and of the Masoyise iTB Technical Task Team that includes representatives from the Chamber of Mines, Department of Mineral Resources, DOH, and representatives from labour unions, and contributes to the development and implementation of TB policies as a member of the Transport Sector HIV/AIDS and TB Committee.

Work with SANAC to identify opportunities for support to strengthen HIV-TB collaborated response: TB SAP discussed potential areas of collaboration with the South African National AIDS Council (SANAC), and is drafting a memorandum of agreement between the two organisations to strengthen HIV-TB collaborative responses. The MOA is expected to be finalised in the next quarter. The project is also a member of the SANAC National Nerve Centre, which meets quarterly to review progress in the implementation of the national HIV testing services and provision of associated services, such as TB/HIV collaborative services. Dr Robert Makombe presented the TB SAP to a meeting of the NNC in September 2016, introducing the project and highlighting its support to the GoSA efforts to fight TB, TB/HIV and MDR TB.

1.3 IMPROVED TB SCREENING, INCLUDING KEY POPULATIONS

Mass screening held at Holy Cross High School: The project held a mass screening on May 3rd with a total of 164 people – including learners and staff – screened for TB. Of those, five were found to be symptomatic; all five were referred to a health centre for further investigation. Furthermore, during provincial support visits, the project obtained guidance from the provinces on addressing TB in the farming sector in the following districts: Sarah Baartman District in Eastern Cape Province, Vhembe District in Limpopo Province, Namakwa District in Northern Cape Province (tentatively), and in the West Coast and Cape Winelands District in Western Cape. The project also initiated fruitful discussions with AgriAIDS, an NGO working to address HIV and TB/HIV in the agricultural sector. AgriAIDS representatives were

encouraged to apply when the RFA is released for the Grants under Contract portfolio. The project will use identified gaps to develop strategies to address TB among farm workers.

Conduct targeted studies and operations research (OR) to identify barriers to early diagnosis and treatment adherence for specific population groups and geographic areas:

Following identification of Sarah Baartman District as the site of PPP activities to address TB in farms, an action plan is under development and will include an operations research element, including the use of focal group discussions, to identify barriers to early diagnosis and treatment adherence. The OR will be conducted in the next quarter, and will be used to develop a package of intervention to reduce access barriers to vulnerable and underserved groups.

Strengthen involvement of community partners to screen key populations in targeted districts: Several NGOs in Cape Western Cape Province (West Coast and Winelands Districts), Northern Cape (Namakwa), KwaZulu-Natal (uMkhanyakude) and Mpumalanga (Ehlanzeni) have been short-listed to strengthen the involvement of community partners to screen key populations in these districts. They will commence targeted TB screening and activities to improve retention on treatment when approved, in the next quarter.

Develop Standard Operating Procedures (SOPs) and policies on screening and follow-up:

SOPs on the ongoing support for health and mobile facilities at district and community level in the key populations will be developed to be implemented in the next quarter. Three NGOs that are currently funded are already implementing household IPC measures and targeted TB screening in NMBMHD, BCM and GS, while short-listed NGOs have been guided to include these interventions in key populations their proposals. The TB SAP is promoting a Network Model that links health facilities and NGOs in supported districts. The NGOs provide TB, TB/HIV and MDR-TB treatment support for the benefit of health facilities. They also conduct community awareness campaigns.

During the reporting period, three grantees employing mHealth for patient retention and adherence support of MDR-TB patients were awarded contracts spanning the period from 1 August to 31 July 2017. These NGOs are Letsema Circles (Buffalo City Metro), St Francis Hospice (Nelson Mandela Bay Metro) and Isiphephelo Home Based Care (Secunda). The NGOs provide services to TB patients in informal settlements in Nelson Mandela Bay Metro and Buffalo City Metro and in peri-mining communities in Secunda.

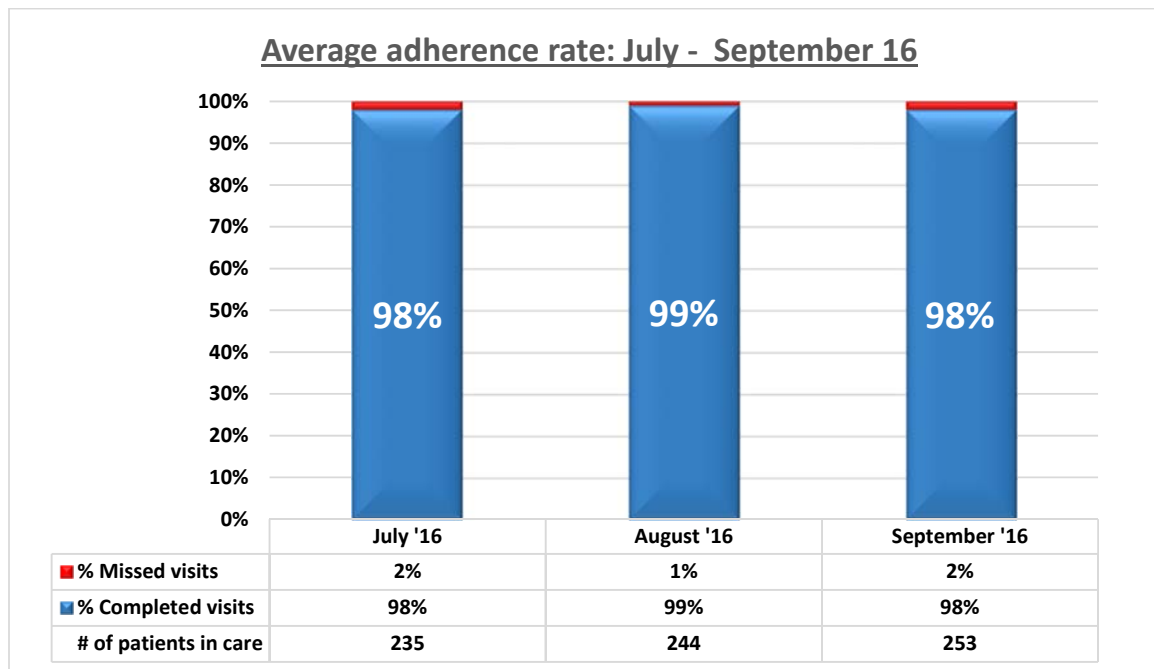
The three NGOs collectively reached 19,894 community members with TB messaging and screened 17,254 individuals.

During the period under review, 1,229 TB (7% of screened) presumptive cases were identified for evaluation, with the consequence that 47 (4% of presumptive cases) people with TB were identified and linked to care. In total, 5,767 people were tested for HIV, 60 were diagnosed with HIV positive and linked to care. Incidence of TB from community activities was 272/100,000. This is below expected incidence among these vulnerable communities. The project will focus on contact management-based screening to improve yield in these communities.

Cumulatively this initiative has conducted more than 61,971 visits since May 2016. A total of 465 patients have been linked to mHealth app at various levels of MDR-TB treatment. Seventy-two patients completed treatment and 26 died. A total of 114 patients either

developed complications requiring referral to hospital or moved away from the district. The number of patients receiving care increased from 219 in Quarter One, to 253 in Quarter Two. Supported patients have exhibited very high adherence rates of 98%, 99% and 98% in the successive months; see Figure 3 below.

Figure 3. Average TB treatment adherence rate among patients linked to mHealth application



To scale up NGO involvement in TB control, TB SAP has initiated a new round of small grants program. A call for proposals was shared with all the provinces, supported districts, and previously funded NGOs as the first step in selecting new NGOs to fund under the TB SAP’s Small Grants component. **Three hundred and thirty-seven (337) grantees responded and 200 applicants were short-listed.** A Request for Applications (RFA) document was sent to 75 applicants. The 54 responses (including submitted proposals, budgets and supporting documents) were reviewed by a Grants Selection Committee. The Committee short-listed 32 applicants; all 32 were presented to USAID and NDOH representatives, leading to the short-listing of 22. Nine (9) local NGOs had their proposals submitted to USAID for approval, and the remainder were being supported to enable their applications to be submitted early in the forthcoming quarter.

Capacity building on TB/HIV ACSM for all programme managers (TB, HIV, PMTCT, NCD and others) in supported districts: In July, August and September, the TB SAP, under the Strategic Communications component, co-hosted three meetings with the National Department of Health on the development of a standardized training manual on ACSM. A roadmap outlining steps and deadlines for the development of the tool was developed and approved during the first meeting. Training of district managers on ACSM will be piloted in Eastern Cape and Gauteng. At the time of reporting, three draft modules on i) Advocacy, ii) Communication, and iii) Social Mobilization were in place. These were reviewed by members of the task team mandated to develop the manual pending revision and finalization. During the next quarter, the modules will be consolidated into a manual and shared with the NTP

and USAID TB SAP senior management for approval. Following endorsement, the document will be used to build the capacity of district managers on ACSM.

Engage all leadership on TB: Traditional, local leaders, community counsellors, district and provincial leadership: The TB SAP been nominated as the Secretariat of the National Coalition Against TB (NCAT), paving the way for even more enhanced engagement with civil society partners. The NCAT aims to mobilize NGOs, CSOs and communities to get involved in efforts to end TB. Its objectives are to:

- Illuminate the various challenges TB poses in communities and highlight the need for strategic partnerships to set off a bold response to the epidemic
- Develop a program of action that will inform its work (this was the focus of the first meeting)
- Capacitate members of the Coalition to strengthen their participation in the fight against TB, and
- Monitor and evaluate the implementation of the program.



Figure 4. Program of action of the National Coalition Against TB

The proposed Program of Action of the Coalition is outlined below (see figure 4). This is the first conceptualization of the approach, which is still subject to change once deeper discussions have been had between members of the Coalition in the months to follow.

- Community dialogues in identified high priority districts to identify key TB issues related to stigma and other issues affecting TB program performance.
- Collection of targeted district-specific issues for dialogue.
- Development of targeted ACSM program of action with clear roles and responsibilities in targeted districts.
- Capacity building for NCAT members and TB ambassadors and influencers on the

Coalition's Program of Action and ACSM issues related to TB (district and community-specific).

- Implementation and M&E, and providing continuous feedback to the community to relay information on community-determined priorities and interventions.

IR2: SUSTAINABILITY OF EFFECTIVE TB RESPONSE SYSTEMS INCREASED

2.1 STRENGTHENED MANAGEMENT CAPACITY AT ALL LEVELS

Ideal Clinics: The engagement with the RTC has also opened the way for the project to explore the support areas for Ideal Clinic Realization and Management in the supported districts. RTC has identified the Ideal Clinics as their point of departure to ensure provision of quality integrated health care to the communities. To this effect there are district and facility trainers in selected districts in the NHI pilot districts. The project will support capacity building of these trainers to equip them with skills on TB management. In the next quarter, TBSAP and RTC are to revise and update TB, TB/HIV and DR-TB training modules. TBSAP will assist RTC to identify training methodologies that enable evaluation of capacitation benefit to be measured and reviewed for scalability (training strategies to be adopted include low dose high frequency training, web based training modules, and onsite training sessions).

As of participating at national level to review data collection tools; the Monitoring, Evaluation and Learning (MEL) team participated in two NDOH and WHO supported meetings planning the rollout of new MDRTB regimens especially the 9-month regimen. The meetings took place 4-7 and 14-15 July 2016 at OR Tambo airport in Johannesburg. There are implications to the tools currently in use which will require revision. URC is part of technical team and will support roll out of the shorter regimens.

Following the NDOH supervision visit to the Mpumalanga (June 20-24); the NDOH M&E department was tasked to come up with a plan to improve the quality of data in Mpumalanga and the whole country. The MEL team has held discussions with NDOH M&E team; planning activities in Mpumalanga to train the health district and facility staff on data quality improvement and management. TB SAP was tasked to develop a tool for data quality assessment for use nationally. This activity will build capacity for M&E on NSP activities and increase data use at facility and district levels.

Collaboration with Regional Training Centres (RTC) to update training material: The RTC are the main vehicles for capacity building in the country and the project is working with the unit to improve training systems in the provinces. The project held meetings with the RTC to identify areas of collaboration for the project. PC101 (comprehensive guideline for primary health care) is currently the main tool for capacity building for staff, but the TB component needs to be strengthened. The TB SAP, in partnership with Regional Training Centres (RTCs) nationally and provincially, focused on institutionalising the project capacity development methodology and ensuring the standardized of quality training packages that can be accessed by health workers. This also includes incorporating the Quality Improvement Methodology (QIM) into all capacity building activities supported by the project. The Eastern Cape, Limpopo, KwaZulu-Natal and Mpumalanga provinces have been engaged to date.

Training materials on comprehensive management of TB (including DR-TB, TB and non-communicable diseases, TB and silicosis) were designed per cadre. Course accreditations for specific modules were submitted to the health professions for approval. The project also contributed to the revision of the national MDR-TB guidelines with the working group to finalise project recommendations.

In collaboration with the NDOH, build capacity for M&E on National Strategic Plan activities and increase data use at facility and district levels: The TB SAP is part of the National Task Team to address initial lost to follow-up (LTFU). The team successfully conceptualised a proposal to address the national initial ILTFU, which is up to 17% (*the XTEND study*). Key interventions identified include:

- Undertake district baseline assessments and set targets
- Implement electronic system for routine monitoring/reporting on ILTF at facilities
- Implement quality improvement approach to reduce ILTF

TB SAP will implement the action plan in Nelson Mandela Bay Metro to evaluate efficacy of interventions.

Collaborate with tertiary institution to develop a short course on TB and TB/HIV management: The project met with representatives of the University of Pretoria School of Public Health and identified the following areas of potential collaboration: **1)** Capacity building; **2)** Health systems strengthening; and **3)** Evaluations at three levels (training, implementation and impact). The project and the University of Pretoria are developing a partnership agreement with deliverables clearly outlined. The university will submit a proposal, work plan and budget for review by TB SAP.

2.2 STRENGTHENED SERVICE DELIVERY CAPACITY AT ALL LEVELS

Provincial HAST performance Review meetings: The project participated in the HAST reviews in Eastern Cape, Limpopo, Northern West, Northern Cape and Mpumalanga. HAST programs annual reviews are conducted to review previous year's performance and to plan and guide the following year performance. The reviews act as platforms to share best practices and for districts to learn from each other. The meetings emphasized the importance of programs performance and the need to achieve the targets set out in the DIPs.

DR-TB Reviews: The project supported DR-TB reviews in the Eastern Cape, Kwazulu Natal, Western Cape and Free State province in the reporting period. Based on these review, it is clear that decentralization of DR-TB service is still suboptimal. Greater emphasis must be put on further decentralization of treatment initiation, patient management, and follow-up to lower level facilities. This will require capacity building and strengthening of key systems that are critical for patient retention and adherence support. Although decentralization of DR-TB services has been slow, 10 sites were activated during the reporting period. The Bedaquiline program has also scaled up rapidly with 463 clients being initiated on the new treatment regimen and 50 clients awaiting approval from the treatment committee. The Delamanid Care Access Program (DCAP), is in the process of recruiting clients eligible for Delamanid. The review committee will identify eligible clients. While treatment success rate continues to be a challenge the following areas of improvement are beginning to show promise:

- Increased uptake of bedaquiline is yielding some positive results with preliminary results from Nkqubela hospital showing good conversion rates at six months and greatly reduced mortality. The preliminary results are yet to be presented to WHO and the international community by the DOH.
- Patient retention strategy supported by TB SAP in Eastern Cape and North West has patient retention of up to 97%. TB SAP is planning to implement the patient retention strategy to counter the high lost to follow up rate in King Dinizulu Hospital Complex.

The project is a member of the technical working group contributing towards revision of the 2013 South African MDR TB clinical guidelines. TB SAP is responsible for revising national guidance on management of contacts of XDR and MDR TB patients.

To strengthen service delivery, the project conducted various trainings on TB, TB/HIV, reporting and recording. During the reporting period, 222 health workers, including community health care workers were trained on TB, as outlined in the table 2 below. The training will be further supported by way of mentorship during the support visits by the project to the facilities.

Table 2: Health care workers training numbers: July-September 2016

Province	District	Title of training	Dates	Category trained	Total #
Eastern Cape	Buffalo City	Basic TB Training	15-16 September 2016	Community Health Care Workers	19
Gauteng	Provincial training	Basic TB Management	15-19 August 2016	Health Care Workers	20
	West Rand (Anglo Gold Ashanti – Savuka mine)	Basic TB/HIV Management	16 th August 2016	Peer Educators	32
		Basic TB/HIV Management	17-18 August 2016	Nurses	16
Limpopo	Waterberg	Basic TB/HIV Management	20-21 July 2016	Community Care Givers	33
		Basic TB Management	29 July 2016	Student Midwives	28
North West	Ruth Segotsi Mompoti	Recording, Reporting and Data Management	25-26 August 2016	Multi-disciplinary team	60
	Dr Kenneth Kaunda - Anglo Gold Ashanti	TB/DM/HIV	14 th September 2016	Peer Educators	14
Total					222

Drug-Resistant TB support: TB SAP has identified six (6) high burden DR-TB districts for implementation of the DR-TB model of care, primarily to reduce initial lost to follow up (ILTFU), to ensure adherence to guidelines, and ultimately improve treatment outcomes. These districts include Sarah Baartman, OR Tambo, Nelson Mandela Bay Metro (Eastern Cape); UMkhanyakude, Amajuba, Harry Gwala (KwaZulu-Natal); and Cape Winelands (Western Cape). These sites were selected in collaboration with NDOH and PDOH as demonstration sites for models for scale. All sites rifampicin resistance rates of above 5%.

Six (6) high burden DR-TB districts, Sarah Baartman, OR Tambo, Nelson Mandela Bay Metro (Eastern Cape); UMkhanyakude, Amajuba, Harry Gwala (KwaZulu-Natal); and Cape Winelands (Western Cape) were identified for implementation of the DR-TB model of care, primarily to reduce ILTFU, to ensure adherence to guidelines, and ultimately improve treatment outcomes.

The program evaluated clients diagnosed with MDR-TB and linked them to care in the reporting quarter. This is done through supportive supervision and sub district coordination meetings. Bottle necks in patient linkage include lack of or complex referral pathways, lack off or poor utilization of feedback mechanisms (ensuring down referral/up referral). As shown in table 3, the proportion of those diagnosed with TB and started on treatment varied from 51% in UMkhanyakude to 86% in OR Tambo with an average rate of 73% across all districts.

Table 3: Proportion of those diagnosed with TB and started on treatment in 6 high burden DR TB districts.

Indicator	Sarah Baartman	OR Tambo	Nelson Mandela Metro	UMkhanyakude	Amajuba	Harry Gwala	Cape Wine Lands
Diagnosed	29	37	62	69	39	29	42
Started on Treatment (number)	24	32	35	55	20	21	35
Started on Treatment (proportion)	83%	86%	56%	80%	51%	72%	83%

Additionally, a root-cause analysis was conducted in supported district (Sarah Baartman, OR Tambo, Nelson Mandela Metro, UMkhanyakude, and Cape Winelands) which revealed the following challenges:

- Duplicates from the national laboratory health services account for inflated number of Rifampicin resistant cases. An analysis in Sarah Baartman revealed three cases reported were duplicates.
- Long time to treatment. Complex referral pathways, and lack of clarity on diagnostic algorithms prolong duration of initiation and result in patients dying before treatment or being lost to follow-up.

Improve data outcomes: Data quality contributes to poor outcomes currently being reported. The TB SAP, as part of a baseline assessment- see table 4, supported national data quality

assessments conducted in KwaZulu-Natal, Eastern Cape, Gauteng, Mpumalanga and the Western Cape, with the following outcomes being reported for the January to March 2014 treatment cohort being evaluated.

Table 4: initial TSR and post TSR assessment

	KwaZulu-Natal	Eastern Cape	Western Cape	Gauteng	Mpumalanga
Initial TSR (%)	52	37	36	42.4	18
Post DQA TSR (%)	60	48	38	47	53

The Data Quality Assessments conducted resulted in dramatic changes in treatment success rates of the cohorts with the following observations:

- Access to EDR.web is severely limited, with some operational managers not able to access the reporting platform to evaluate program performance.
- There are capacity gaps amongst clinicians and program supervisors on use of EDR.web and MDR-TB outcome definitions.
- Use of web-based laboratory results server is also useful in identifying down referred clients' access to services, as well as consistency in reporting on the EDR.web module.
- The need for standardized referral tools, and SOPs that include feedback at down referred site.

To improve recording and reporting for DR-TB, the TB SAP developed and rolled out an MDR-TB DQA SOP and Tool to institutionalise monthly data duality assessments. Further, an integrated training package with quality improvement methodology and program evaluation for DR-TB health workers has been drafted.

2.3: IMPROVED DATA REPORTING AND RECORDING SYSTEMS AT LEVELS

Drat Reviews: NTP is rolling out the District Rapid Appraisal Tool (DRAT) for TB in all provinces, to assist TB program managers to understand and improve TB clinical management of patients and ensure improved performance of the program. District Rapid Appraisal Tools (DRAT) are a key intervention to enable quick but in-depth review of the TB/HIV program at facility level, to allow for district programmatic planning. DRAT exercises were conducted in four provinces: eThekweni (KwaZulu-Natal), Frances Baard (Northern Cape), Ekurhuleni (Gauteng), Mangaung (Free State) and Vhembe (Limpopo) respectively. Key general findings include: sub-optimal data quality (information not recorded consistently in appropriate clinical stationary, adherence to both patient and program management guidelines, limited supervision and understanding of quality improvement activities, which has led to poorly developed plans that do not bring about improvements (analysis of root causes for identified challenges is not done and poor monitoring of developed quality improvement plans). In most facilities visited, there were no infection control files. This forms an important basis for formulating interventions which are guided by the TBSAP M&E strategy.

Moreover, the project will work with the provinces to strengthen and promote the quality of routine systemic screening and diagnosis of TB in supported facilities. Support will include capacity building to strengthen clinical management of TB. The project will support the

identified facilities to ensure data validation, verification and analysis at all levels to enhance timely and appropriate interventions. In addition, training will also be provided on infection control as part of support aimed at improving infection control in supported districts.

Strengthened Training for Quality Improvement: TBSAP's model for health workforce development will focus on supporting teams of HCW and managers innovate and test solutions to address health workforce challenges improving performance and productivity throughout the health system. Training and mentorship activities will be integrated into a QI platform designed to strengthen systems level capacity. During the period under review, TBSAP project staff were engaged with the RTCs to discuss project support so as to strengthen capacity building strategies for both managers and health care workers. This will lead to improvements in the quality of training, and assessment of the effectiveness of the trainings being given to healthcare workers.

Piloting the use of biometric scanners in place of unique identifier: A concept note with a number of changes to the ConnectTB platform has been developed. These changes include the use of biometric scanners as unique identifiers. A few more changes have been suggested and these will be incorporated into the concept note. (i.e. generation of reports by the system to link payment to performance). These proposed changes will be implemented in the new financial year.

IPConnect: URC's IPConnect is a suite of mobile health (mHealth) applications that will help strengthen administrative IPC procedures and allow National Department of Public Health (NDOH) staff gather and analyse data for more targeted IPC resources and response.

Support integration of the TIER.net and ETR.net module: To support ETR/Tier.net Integration, the project supported meetings in Mpumalanga, Limpopo, Gauteng, Northern Cape, Western Cape and KZN. The meetings brought together districts, with the aim of introducing them to the integrated new system, appointing implementation teams, and developing a roll-out plan to guide implementation of the system. The project also represented the provincial implementing teams in spearheading the roll-out of the ETR/Tier.net. Major activities will include providing support to facilities on back capturing of data – data validation workshops will be critical to ensuring a smooth transition. Support was provided to Gauteng, Limpopo and Northern Cape provinces.

Use information communication technology (ICT) for quality control and supervision: The electronic supervision tool was field tested 5-9 September 2016 and recommendations for its improvement made based on practical experience on the ground. The e-supervision tool is being improved for pilot testing in the coming quarters.

Support NDOH/PDOH to conduct program reviews of priority districts to identify gaps and opportunities to further improve implementation strategies to achieve NSP targets: The project works jointly with the NDOH TB Cluster at national level to improve the management of the HAST Programs at provincial and district level.

Main challenges identified were related to data quality and non-adherence to guidelines (treatment initiation algorithms, not paying attention to pharmacovigilance, and poor implementation of integrated care for patients e.g. DR-TB patients are seen at DR Unit even for minor ailments). Key areas identified for project support are:

- Strengthening data management processes.
- Strengthening TB supervision systems: The TB SAP supervision approach has been developed and is being rolled out with the following key tactics: use of cluster model in implementing supportive supervision including use of low dose high frequency mentorship, model sites to fast track achievement of performance targets and operationalising Reach Test Treat approach for targeted district interventions. An eSupervision platform was also developed and tested in Gert Sibande in Mpumalanga. Some technical challenges were identified and fields will be revised for implementation.
- Capacity building for TB coordinators and local area managers on the management and monitoring of the TB Program using the Quality Improvement Methodology (QIM). The QIM capacity building package was developed and implemented in UMkhanyakude and Gert Sibande in response to recommendations to improve the capacity of supervisors and management on quality assurance and improvement. Priority districts have been identified as OR Tambo, UMkhanyakude, Gert Sibande and Vhembe. However, QIM has been integrated into the TB SAP approach in the supported 23 districts.
- Expand use of ConnectTB mHealth application to improve patient management, interaction between the provider and the patient, pharmacovigilance (for DR TB), and adherence.

Currently, three districts are using the ConnectTB application to conduct DOT visits every day as mentioned above. One NGO in Ethekewini district is awaiting contract approval, following which training will be conducted as the devices are ready for utilization. In the last week of September 2016, TB SAP also presented the ConnectTB application to Cape Winelands District, who are very keen to introduce the technology.

IR3: CARE AND TREATMENT OF VULNERABLE POPULATIONS IMPROVED

3.1 INCREASED CONTACT TRACING OF KEY POPULATIONS

Effective TB monitoring, surveillance and preventive services for the vulnerable populations are critical for basic understanding of the risks and inform targeted TB control activities. To achieve equity and to reach the national and global TB goals, URC, under the TBSAP Project, will support the NDOH to give special focus to marginalized, vulnerable populations and those most at-risk to ensure that country-level goals can be met. During the reporting period, TBSAP team developed a strategy for reaching vulnerable populations. The TBSAP Project will use several approaches to increase care and treatment services for vulnerable populations: (1) improved systems of reaching these populations through contact tracing and TB case monitoring; (2) expanding community involvement in and links with the PHC system for directly observed treatment short course (DOTS) delivery; and (3) increasing formal and informal linkages with organizations and institutions that work with these populations.

The team also developed mHealth strategy which outlines array of platforms directly addresses TBSAP's Intermediate Results and contributes to all intended outcomes. Offering innovative mHealth tools in the fight against TB stands to make the greatest impact. TBSAP's m Health solutions will greatly help improve access, promote quality, and increase the use of

a wide range of health services. TBSAP mHealth tools and solutions will complement and integrate with existing data collection and management tools and do not replace essential monitoring and evaluation systems. Rather, these solutions help bring information to managers, staff and patients in timely and useful ways that allow them to better achieve program targets.

The project participated in TB screening in Kanana peri-mining community in Klerksdorp, North-West Province, reaching 300 people with IEC materials and screening 128 adults for TB. West Vaal Mine Hospital was assisted with designing a tool to support contact management and to enhance referrals of TB contacts to facilities in the district. Mine peer educators were also trained on basic TB management and TB screening.

Contact investigation: Contact investigation is a key component in all sub-grants. These grantees track all contacts of index TB cases in their respective catchment areas. The number of adult contacts screened were 422 in the reporting period; TB presumptive were 66 and eight were diagnosed with TB; a yield of 1,895/100,000. Thirty seven child contacts were screened, four were presumptive TB and three diagnosed with TB; three were started on treatment. Engagement of other grantees in the supported districts will improve contact tracing using the Network Model (NGOs linked to health facilities for prevention, case finding, treatment support and contact management).

TB contact tracing in peri-mining communities: Tuberculosis in the mining industry in South Africa remains a major public health challenge, due to working and living conditions as well as exposure to silica dust.

- The project supported contact tracing activities at Medupi Power Station Plant, Waterberg. 161 contacts were reached, and screened for TB. Of these, 12 were presumptive TB and none of the contacts were diagnosed with TB. Screening for blood pressure and diabetes were done on 89 and 50 patients respectively.
- To strengthen contact tracing, Anglo Gold mine peer educators were trained on basic TB management and TB screening. During the reporting period, door-to-door events were conducted in the peri-mining communities. A total of 1,004 people were reached and all were screened for TB. Fifty-six were presumptive TB; 54 were tested for TB; and 51 were diagnosed with TB and initiated on treatment.

Further, the project is a member of a national task team developing strategies on contact management in mines and peri-mining communities.

Develop and implement a contact management and monitoring strategy in collaboration with the Global Fund, PEPFAR, SANAC, NGOs, and others: Discussions were held with the Global Fund team in the National Department of Health to develop areas of collaboration on TB in the mines and in peri-mining communities/informal settlements. In the following quarter, the project will join in discussions with the Regional Global Fund grant on TB in the mines, managed by the Wits Health Consortium on behalf of the Southern Africa Regional Coordinating Committee.

Use NGOs in priority districts to support TB/HIV, MDR patient treatment adherence, contact tracing and educate families on IPC: Applications for NGOs to be funded under the Grants

under Contract portfolio were invited after the conclusion of discussions with provincial departments of health about the selection of districts to be supported by the project. Twenty-two grantees are currently under review for funding beginning in the next quarter. Verification visits were made to 22 short-listed NGOs, and potential grantees were supported to revise their technical approaches. These will include targeted screening of contacts of index TB cases and implementation of the NGO network model. Finalized proposals from nine NGOs were submitted for review and approval by USAID; the remainder will be submitted early in the following quarter.

An implementation science proposal will be developed to identify cost-effective models for intensive case finding and contact management. A contact management and contact tracing strategy will be developed in the next quarter.

3.2 IMPROVED TB CASE MANAGEMENT IN KEY POPULATIONS

Develop implementation strategy for TB/HIV/Diabetes mellitus (DM) and non-communicable diseases (NCDs): The project is working with NDoH to intensify integration of TB/HIV/DM and NCDs management in the health care facilities through the ICSM. An implementation approach has been developed looking at three domains of the National Core Standards relevant to TB management and linked to the project IRs: Domain 2: Patient Safety, Clinical Governance, and Clinical Care; Domain 3: Clinical Support Services; and Domain 4: Public Health. Training on the management of NCDs has been incorporated into the current TB training materials. Mentorship support will also be given to the facilities to further strengthen service integration.

Support implementation of district implementation plans (DIPs) to achieve 90/90/90 targets: The South African National Department of Health has adopted the District Implementation Plan Reviews as a mechanism to monitor progress in addressing health gaps particularly in TB and HIV. At the national level, the project participates in the monthly Technical Working Group meetings. Some of the key findings from supported DIP meetings include:

- Non-submission of reports remains a challenge – poor submission reports from EC, KZN and MP. Partial reporting noted in FS and GP
- The quality of reports remains poor – e.g. data inconclusive, cohort data not available, no comments on the reports, data not used effectively

To address these challenges, provinces and districts are encouraged to hold monthly feedback meetings and development of SOPs for TWG roles and responsibilities for the provinces. This will assist in monitoring the implementation of the DIPs. The project is participating in the provincial TWGs to support DIP implementation.

Train health workers both in the public and mining sectors, and support mine managers and health teams: Trainings in the mining sector are ongoing in the North West Province. Health care workers from the South African Military Health Services were trained on TB management. The project has engaged NEXT (a TB SAP partner) on new approaches towards strengthening the participation of private practitioners in TB, using the PPP approach used in South Africa for ART. This will involve training of private care providers, including doctors, nurses, pharmacists and pharmacy assistants on TB screening, diagnosis and treatment. The

Next proposal will target Eastern Cape Province (Sarah Baartman District, OR Tambo District and Nelson Mandela Bay Metro). In Sarah Baartman, this will include activities to link and coordinate TB services for mobile populations.

Develop job aids: Job aids developed under TB CARE II in partnership with SABCOHA and HOSPERSA will be adapted in the next quarter to produce job aids for health care workers on TB management in key populations.

3.3 STRENGTHENED COMPREHENSIVE SYSTEMS AND PARTNERSHIPS FOR CARE

During the reporting period, several meetings were held to strengthen and extend networks around public-private partnerships and addressing TB in key populations, and to explore potential areas of collaboration. Meetings were conducted with the International Labour Organization (ILO), focusing on TB in the transport sector; University of Johannesburg (UJ) to strengthen TB services in tertiary institutions; the Automotive Industry Development Centre Eastern Cape SOC Ltd. (AIDC) to focus on the agricultural sector in Sarah Baartman District, Eastern Cape; and Classic Oriental Consultancy (Pty) Ltd. focusing on TB in small and medium sized enterprise. MOUs/MOAs are being drafted to formalize the partnerships and outline the roles and responsibilities of each party and activities to be undertaken.

TB SAP also met with the Global Fund principal recipient to collaborate closely and avoid the potential overlap of activities and efforts in common areas of operation. It was agreed upon in the meeting that the TB SAP and Global Fund will collaborate on activities in the mines in districts where both partners are present.

Furthermore, the project participated in and contributed to the development on the NSP. The team contributed to the biomedical interventions, TB enablers and strategic communications discussions.

National Think Tank: As a member of the National Think Tank, TBSAP participated in an Extended TB Think Tank Meeting convened by the National Department of Health, participating in and contributing to discussions and decisions to prepare for the development of the TB component of the impending National Strategic Plan (NSP) on HIV/AIDS, sexually-transmitted infections (STIs) and tuberculosis (TB). During these discussions, links with different stakeholders were established and strengthened. Through membership in the Think Tank, the project contributes to the South African Research Advisory Committee on assisting in setting the national TBHIV implementation research agenda. Key areas of research identified through the stakeholder consultative forum included:

- Which health facility and program management interventions impact HIV and TB patient outcomes;
- What models of health care worker supervision and monitoring impact on HCW performance and patient outcomes;
- What modification of facility hours will improve access by key populations; and,
- Optimal contact management approaches.

HCT National Nerve Centre: The project is also a member of the HIV counselling and testing (HCT) National Nerve Centre of the South African National AIDS Council (SANAC), which is co-chaired by the NDoH and SANAC. The NNC was formed to revitalize the HCT campaign in South

Africa and to strengthen links between different stakeholders in the field of HIV and TB prevention, treatment and care. To this end, the USAID TBSAP seeks to raise the profile of TB in the national response to HIV/AIDS, and to contribute to discussions to reduce the burden of TB. During the period under review, TBSAP joined the team responsible for producing the SANAC newsletter. Members of the NNC include representatives from the NDoH, Department of Social Development), USAID, UNAIDS, implementing partners such as TB SAP, Broad Reach, Centre for Communication Innovations, Foundation for Professional Development civil society organizations, national traditional leaders, and non-governmental organizations.

Masoyise iTB Technical Team: TBSAP is also a member of the Masoyise iTB Technical Team (MTTT), chaired by the Chamber of Mines. The Masoyise iTB Technical Task Team (MTTT) is a sub-committee of the Masoyise iTB Steering Committee that was established by the mining sector to support the call-in March 2015 by the Deputy President of South Africa to scale up TB screening, detection and treatment in key populations, including miners. The MTTT secretariat is the Chamber of Mines (COM). Members includes representatives from COM companies, the Department of Mineral Resources (DMR), Department of Health (DOH) including the TB Directorate and the Medical Bureau for Occupational Diseases (MBOD), National Union of Miners (NUM), the South African Business Coalition on HIV/AIDS (SABCOHA), and implementing partners such as USAID TBSAP. The MTTT met during the reporting period to review progress and to develop interventions to address TB in the mining sector in four priority areas: TBSAP initiated discussions to support the assessment of TB treatment outcomes with the Chamber of Mines and the National Institute of Occupational Health to explore potential support from the USAID TBSAP on the treatment outcome activity of the MTTT. A detailed work plan and budget is pending from NIOH.

Strengthening NGOs and WBOTs networks: The project facilitated the NMBHD NGO workshop to align NGOs to Ward-Based Outreach Teams (WBOTs). The purpose of the meeting was to strengthen WBOTs at community level by integrating resources from NGOs to ensure that communities benefit from the resources. The project assisted by developing and sharing a reporting template, and streamlining reporting processes by district NGO coordinators and WBOT team leaders, and leading the pilot NGO mapping, alignment with WBOTs and coordination model. The meeting identified inequitable distribution of CHCWs as the main challenge, with some facilities not having any NGO support. Most NGOs are funded by the Department of Health and the Department of Social Development. The mapping exercise will be used to guide the distribution of NGOs in the district.

Collaborate with Dept. of Basic Education (DBE) on school-based TB education and awareness program activities: The proposed MOA with the DBE will be finalised in the next quarter, and include activities to strengthen school-based TB education and awareness programs.

4 CURRENT DATA FOR OUTPUT AND PERFORMANCE INDICATORS

This report covers data from sixteen (16) out of the twenty- three (23) districts identified for full support by TB SAP. In three districts; Mangaung, Ehlanzeni and Vhembe, the project appointed coordinators at the end of the quarter, while in the other three district Fezile Dabi, West Coast and Harry Gwala, staff are still being recruited. Data from both the City of Johannesburg and Ekurhuleni district is not included in this report given that the support that is being provided to is limited to strategic communications in line with Zero TB Cities principles.

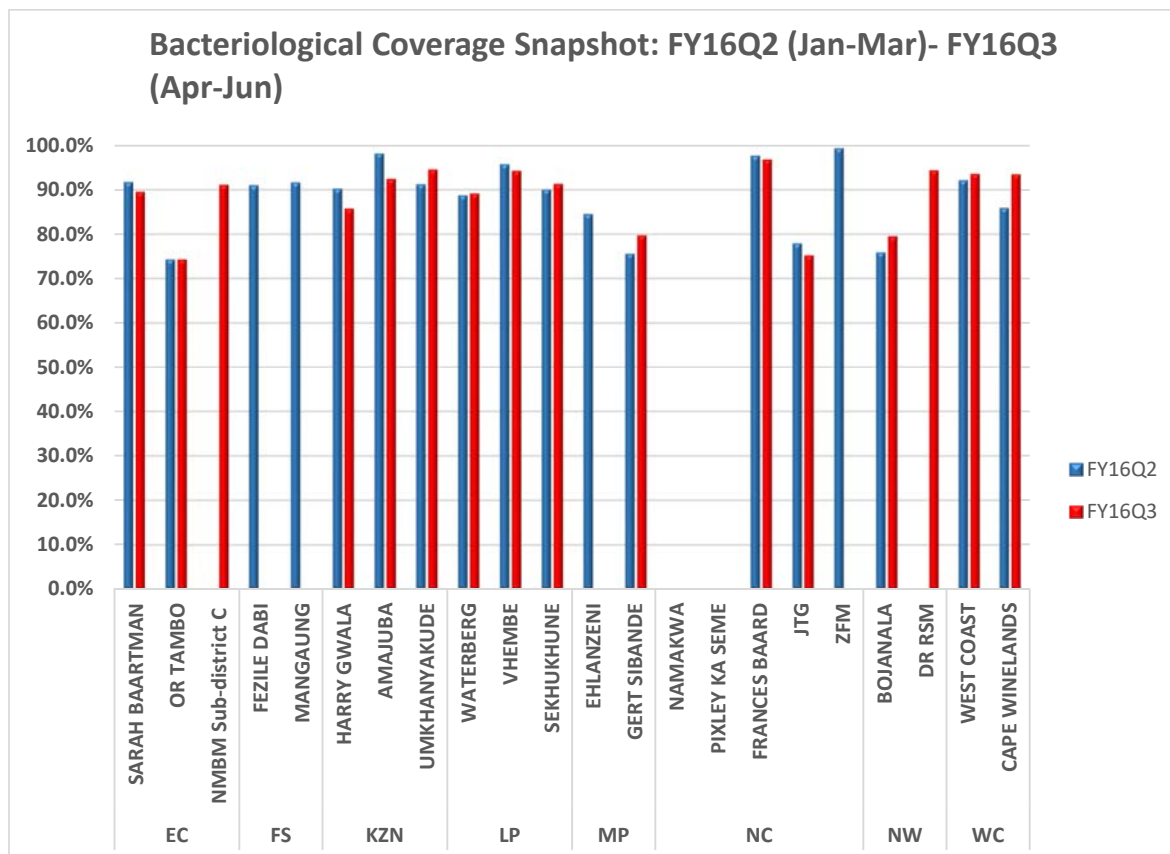
Context of reported data: To ensure data quality, the M&E team in the Department of Health (DoH) has met twice during the reporting period with the TB SAP team to map the way forward in strengthening the recording and reporting for TB data in the targeted areas. The meetings discussed areas needing strengthening such as: completeness, accuracy and timeliness of reporting. Further, the project was requested to support the provincial work on removing data duplicates at local level. TBSAP is working on a training strategy for data deduplication for this quarter. A 2015 notification data and 2014 outcome data have been delayed as the national team is working on removing duplicated entries.

Project Performance Management Indicators: The narrative describes activities conducted in FY2016 Q4 (July to September 2016), the case finding data are from FY2016 Q3 (April – June 2016), while the treatment outcome report is for the cohort registered in FY2015 Q3 (April – June 2015). The data compares with the previous quarter.

TB Case-Finding and Bacteriological Coverage: Case finding data compares January to March 2016 with April to June 2016 data as reported in the ETR.net (which translates to FY16Q2 and FY16Q3).

The total number of cases notified in the 16 supported districts was 13,250. Reported bacteriological coverage is above 80% in the 12 of the supported districts with only four districts have bacteriological coverage below 80%. Figure 5 shows bacteriological coverage snapshot: FY16Q2 and FY16Q3 in 14 districts.

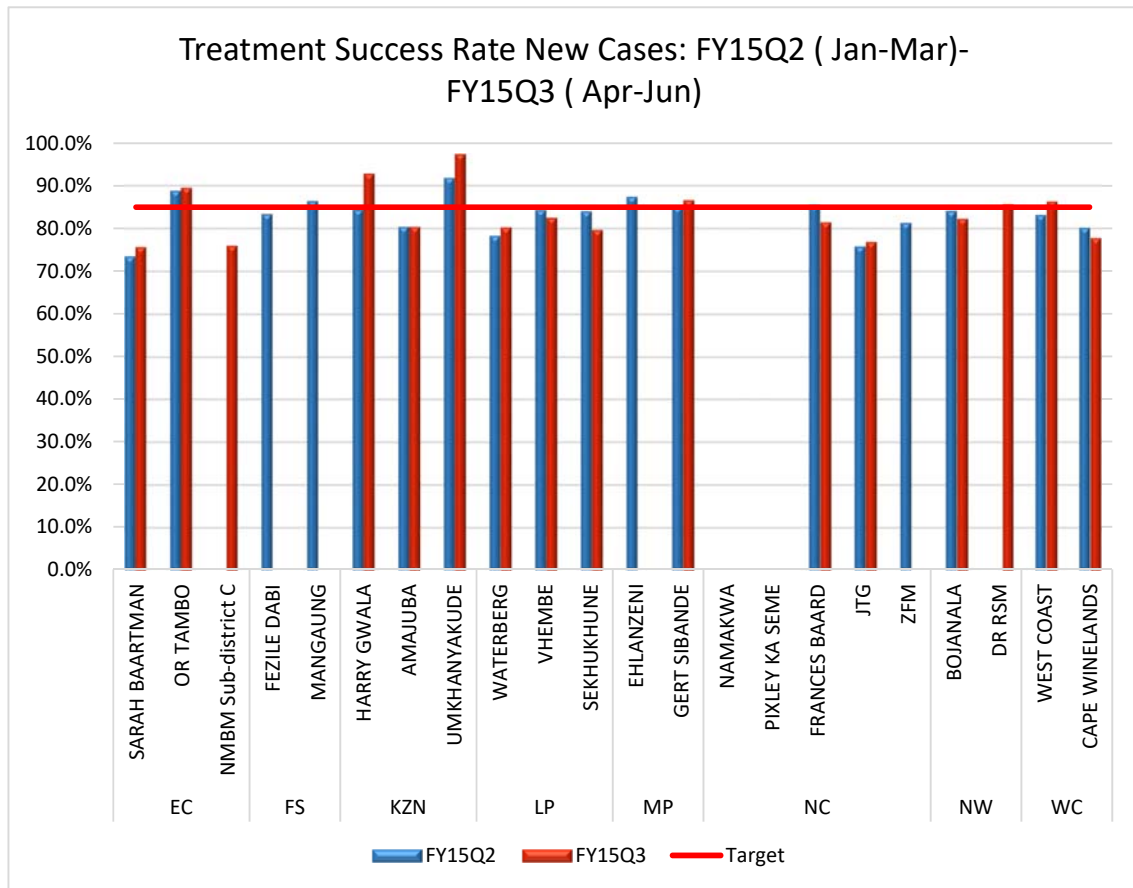
Figure 5: Bacteriological coverage snapshot: Q1:2016 and Q2:2016



Treatment Success Rate

The project target for treatment success rate (TSR) is 85% for the new smear positive cases and 65% for the re-treatment cases. Six (6) of the supported districts reported TSRs of 85%. Project staff is working with district TB managers to identify specific low performing facilities and institute QA/QI plans to identify reasons for poor performance and come up with solutions to the problems identified. Figure 6 illustrates treatment success rates - districts' snapshot: FY15Q2 and FY15Q3.

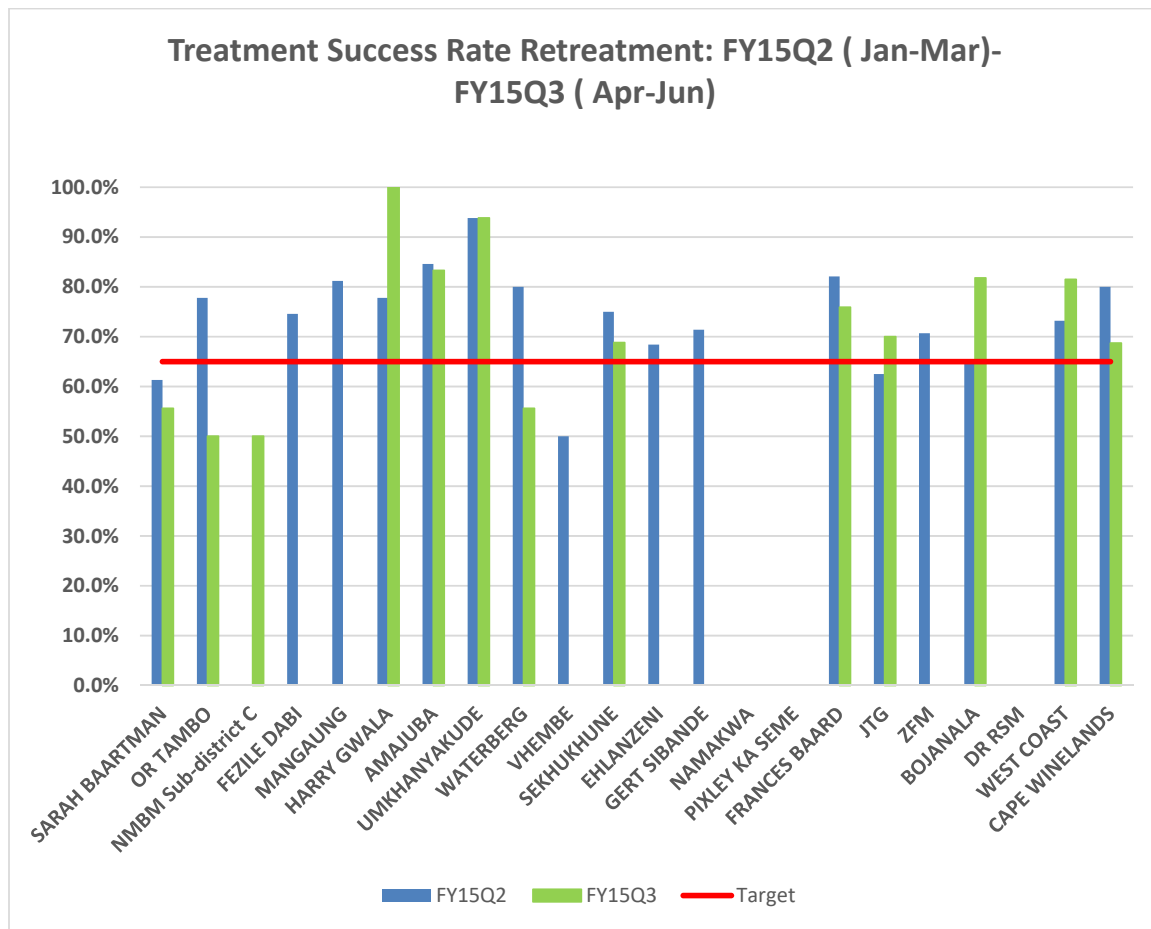
Figure 6: Treatment success rates - districts' snapshot: FY16Q2 and FY16Q3



Treatment Success Rate Among Re-Treatment

Ten (10) supported districts reported treatments success rates above 65%; of these Harry Gwala reported a treatments success rate of 100% and UMkhanyakude reported 94%. Four (4) of the reporting districts have worryingly low treatment success rate among re-treatments rates below 60% with the highest and this can be attributed to high loss to follow up rates. Figure 7 shows treatment success rates among retreatment cases- districts' snapshot: FY15Q2 and FY15Q3

Figure 7: Treatment success rates among retreatment cases- districts' snapshot: Q1:2015 and Q2:2015



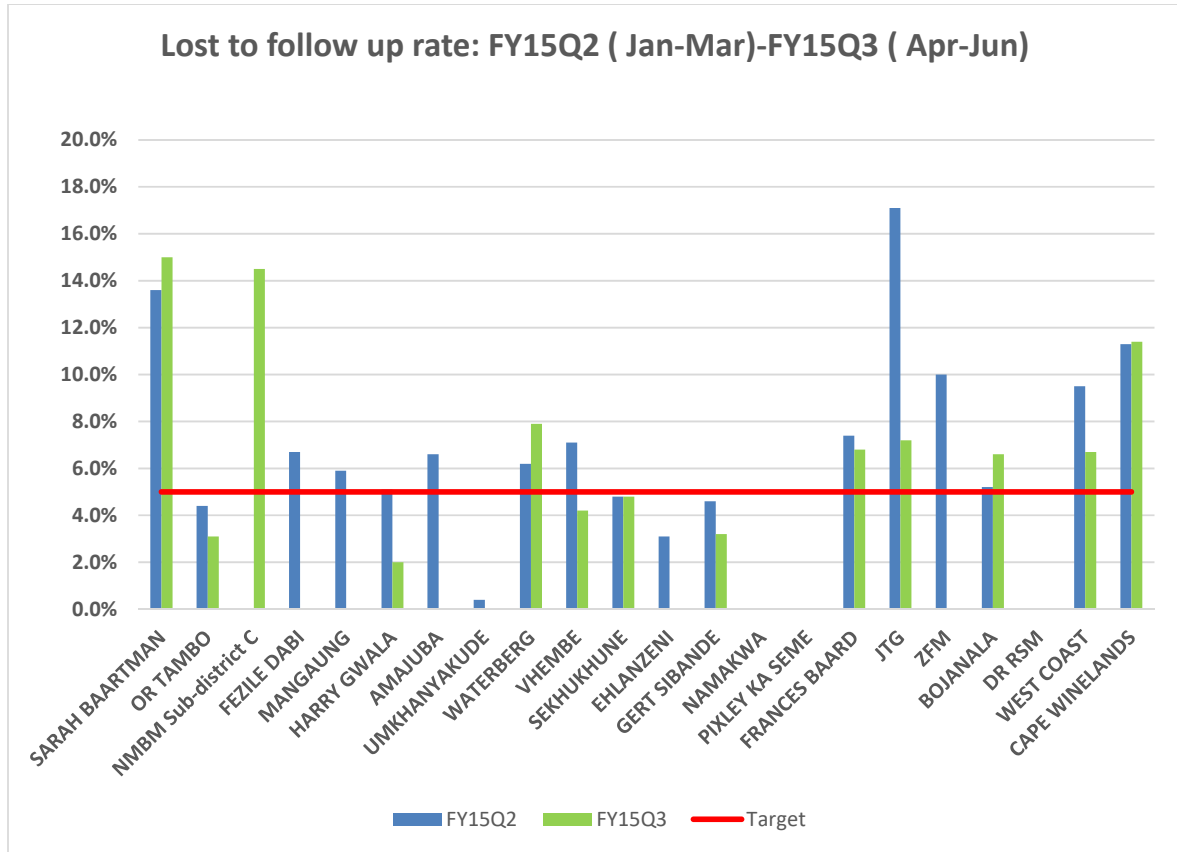
Loss to Follow-Up Among New Smear Positive PTB Cases

Supported districts with loss to follow-up (LTFU) above 10% are: Sarah Baartman (15%), Nelson Mandela Bay Metro sub-district C (14.5%) and Cape Winelands (11.4%); while the following have rates above the 5% target; Waterberg (7.95%), Frances Baard (6.8%), JTG (7.2%); Bojanala (6.6%) and West Coast (6.7%)- see figure 8. This highlight the need to strengthen case holding activities in the supported districts to improve these outcomes. The engagement of NGOs will reduce the LTFU rates. The reasons for the LTFU include:

- Cross border patients in the Northern Cape who only have one tracer team in the province.
- Movement of the seasonal farm workers in the Eastern Cape.

Figure 8 shows lost to follow up rate for FY15Q2 and FY15Q3

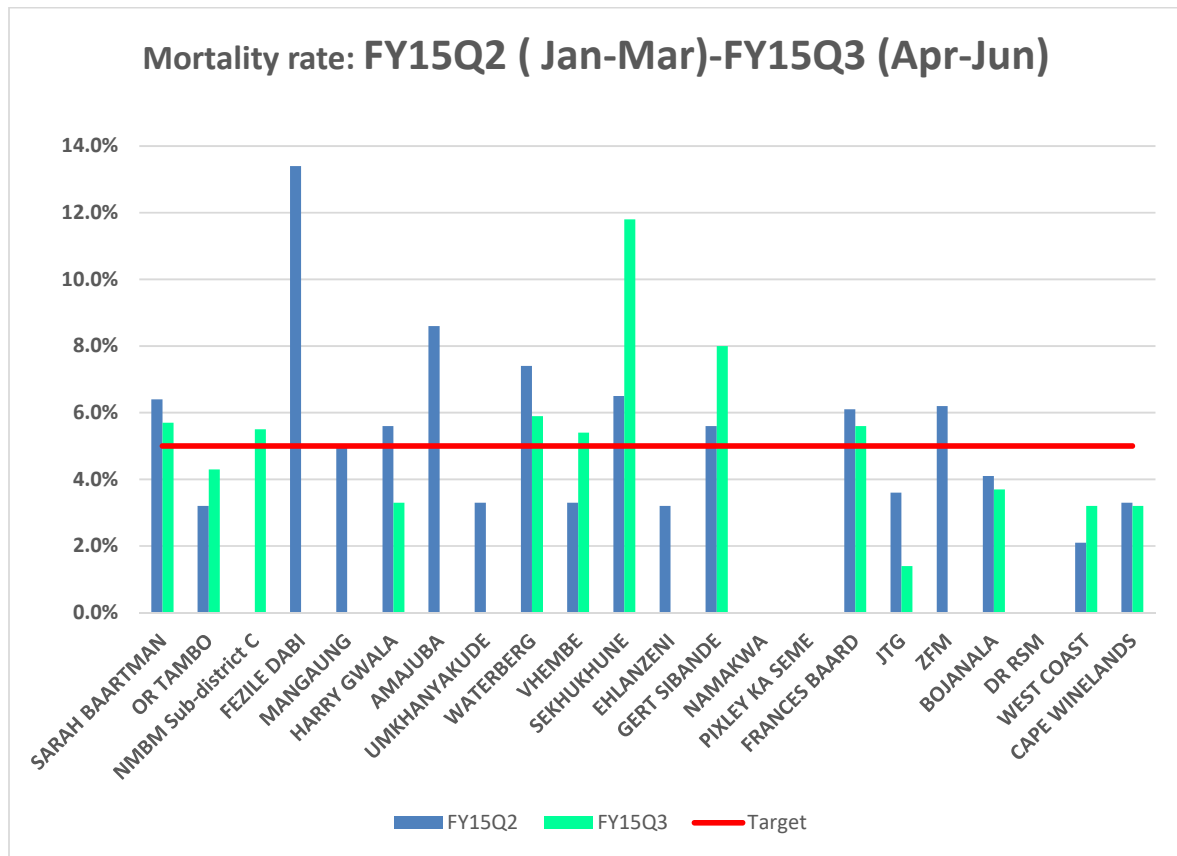
Figure 8: lost to follow up rate for FY15Q2 and FY15Q3



Mortality Among New Smear Positive PTB Cases

Five (5) of the supported districts have mortality below the 5% target, while seven reported mortality above the target. These are Sarah Bartaan (5.7%), Nelson Mandela Bay Metro Sub District C (5.5%), Waterberg 5.9%), Vhembe (5.4%) Sekhukhune (11.8%), Gert Sibande (8%) and Frances Baard (5.6%). Late presentation and low health-seeking behaviours were identified as contributory factors in high death rates. The project activities aim to encourage communities to present early to the facilities to improve clinical outcomes. Figure 9 illustrates mortality rates during FY15Q2 and FY15Q3.

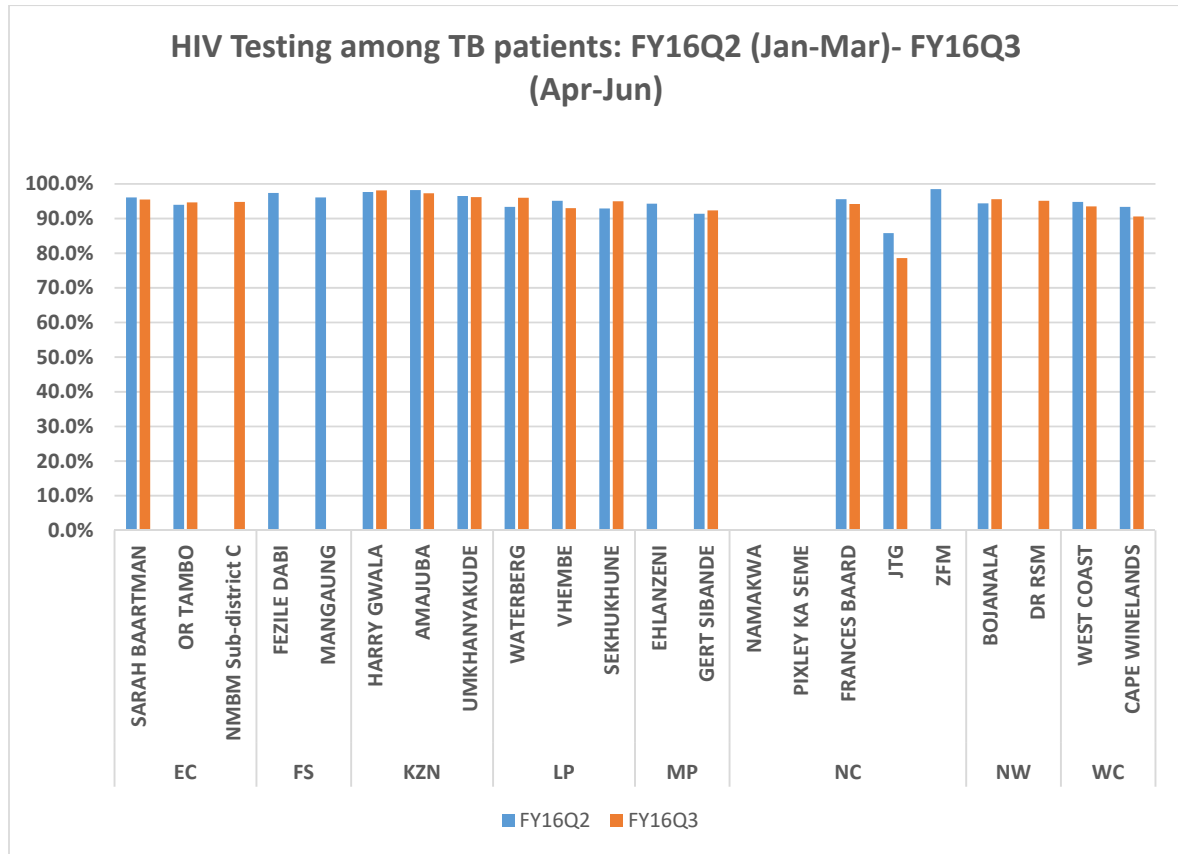
Figure 9: Mortality rates: FY15Q2 and FY15Q3



TB Entry Point:

HIV testing in TB patients: Except for JTG, all districts reached the 90% target of TB patients with known HIV status. Overall, HIV testing in TB patients was at 93.8%, while the HIV positivity rate among those tested was 54.4%. Figure 10 summarizes HIV testing among TB patients during FY16Q2 and FY16Q3.

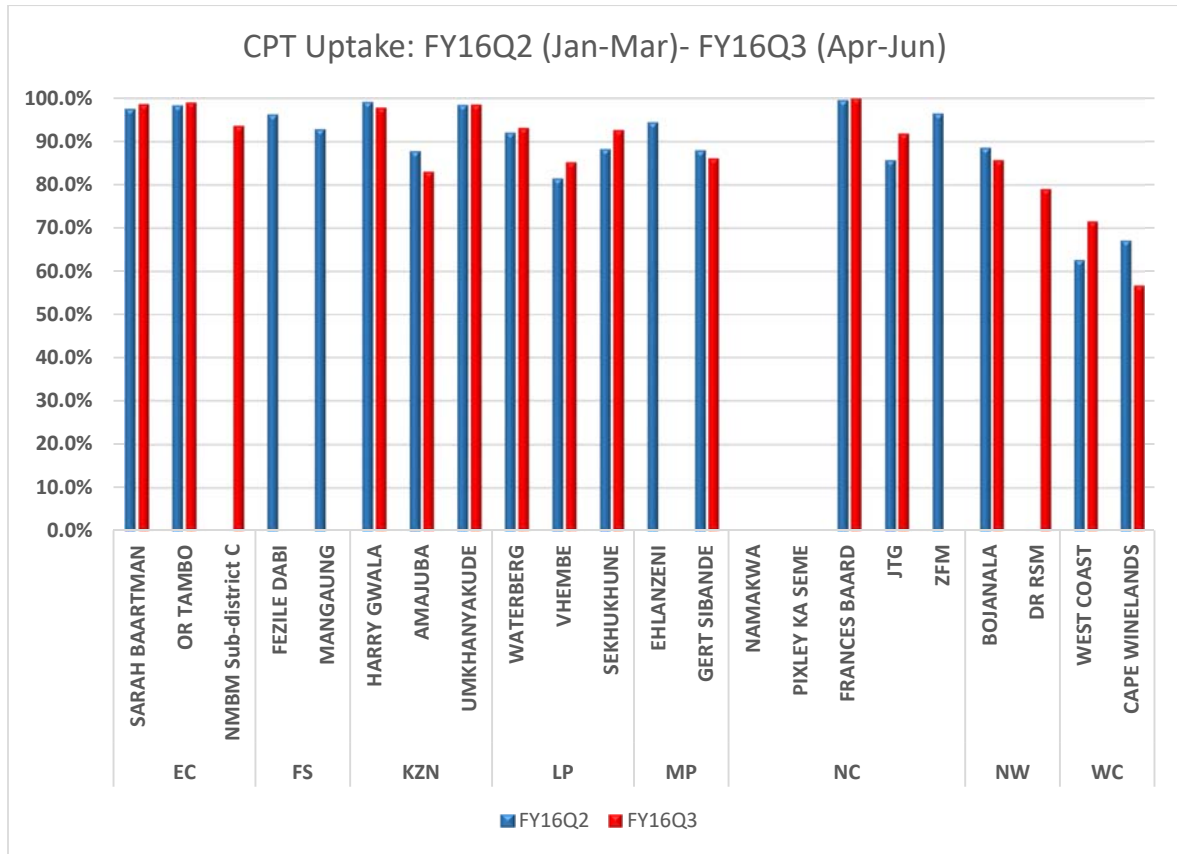
Figure 10: Summary of HIV testing among TB patients



Co-trimoxazole and ART Uptake

During the reporting period, Co-trimoxazole uptake was 89.4% and ART uptake 81.6%. Cape Winelands had the lowest Co-trimoxazole uptake at 56.7%, with West Coast having the lowest ART uptake at 35.2%. Figure 11 summarize co-trimoxazole uptake during FY16Q2 and FY16Q3. Figure 11 summarizes co-trimoxazole uptake.

Figure 11: Summary of co-trimoxazole uptake



5 PLANS FOR NEXT YEAR

TBSAP priority activities for next year include:

- Conduct a 2-day workshop for shortlisted NGOs to orient them about the project as well as to help them with preparing proposals for funding under TB SAP to provide patient retention and adherence support.
- Conduct costing of project interventions and innovative approaches such as mHealth per SC guidance.
- Implement TB in the farms model in Sarah Baartman.
- Develop a package of interventions incorporating the Quality Improvement Methodology.
- Ensure all project supported facilities have data on TB Cascade and it is using for closing the performance gaps.
- Increase patient retention and adherence support by funding a new set of NGOs in high priority districts (high burden and poor program outcomes).
- Finalise strategy to support rollout of nine-month short treatment regimen for MDR-TB.
- Implement FAST Approach in Nelson Mandela Bay Metro, Cape Winelands and UMkhanyakude.
- Complete recruitment of project staff for the assigned districts.
- Finalize the TBSAP district and provincial plans.
- Finalize baseline assessment in priority districts.
- Support implementation of DIPs in the selected districts.
- Continue meetings of TBSAP Steering Committee.
- Award new wave of small grants to support TB services in the supported districts.
- Develop M&E strategy for provincial, districts and facility support.
- Develop a gender mainstreaming strategy for key populations.
- Support the implementation of the patient-centred interpersonal communication and counselling.
- Continue implementation of innovative approaches to disseminate targeted TB education messages.
- Continue institutionalization of TB screening in priority health programs.
- Continue providing capacity building to all program managers on TB/HIV/ACSM in supported districts.
- Finalize database of NGOs in the targeted districts.
- Develop Standards Operating Procedures (SOPs) on IPC and MDR-TB.
- Continue engagement of NGOs in IPC and TB screening activities.
- Support NDOH/PDOHs in response to MDR TB.
- Strengthen districts managers' leadership and M&E capacity through training and on-the-job mentorship.
- Develop comprehensive TB/HIV intervention strategy in coordination with AIDS council.
- Continue supporting mHealth platforms to improve DOT support and facility supervision.
- Conduct assessment of Regional Training Centers (RTCs).

- Expand community-based programmatic management of MDR-TB (cPMDT).
- Collaborate with NHLS to improve access rapid TB/DR TB diagnostic services.
- Facilitate integration of ETR/Tier.net to facility level.
- Engage NGOs in priority districts to support TB/HIV, MDR patients' adherence, contact tracing and education.
- Support implementation of DIPS in the supported districts to achieve 90/90/90 targets.
- Collaborate with department of education (DBE) on school-based TB education and awareness activities.

6 ANNEXES

ANNEX I: SUB-CONTRACTS AND GRANTS

Sub-Contracts

BEA Enterprises is in the final stages of designing the TB SAP website that will highlight the project's activities, news, and TB related resources.

NEXT will be supporting TB SAP's approach to national policies surrounding TB in South Africa, pending USAID approval.

BWH will be providing technical support in FAST approaches pending USAID approval.

CCI will be responsible for the implementation of TB SAP interpersonal communications initiatives, covering all nine provinces of South Africa, pending USAID approval.

Grants

As shown in table 5: the three active grants under TB SAP: Letsema Circle, St. Francis Hospice, and Isiphephelo, have all signed their agreements. The grantees are focusing on mHealth and report monthly on their results. The first month of the grants yielded very positive results from grantees and the team is finalizing procedures for evaluating grantee report results.

Additionally, the TB SAP grants team has met with USAID to discuss the short-listed NGOs for grants. The team is working closely with 22 short-listed NGOs to further strengthen proposed strategies for providing support to DR and DS TB patients. The team has been conducting site verifications and working with NGOs to finalize their proposals for USAID approval. Grantees will work with Tuberculosis service delivery and outreach in priority districts, with a focus on active case finding, contact management, treatment retention for patients with drug-resistant and drug-resistant TB. Nine (9) NGOs had their proposals finalized and submitted for USAID approval. The remainder were being supported to enable their applications to be submitted early in the forthcoming quarter.

Table 5: List of active grants under TB SAP

Grant Number	Grantee	Period of Performance	Grant Value (ZAR)	Grant Value (USD)
FY16-5005-001-G001	Letsema Circle	08/01/2016 - 07/31/2017	R 892,002.40	\$ 74,334.00
FY16-5005-001-G002	Isiphephelo	08/01/2016 - 07/31/2017	R 599,102.00	\$ 49,925.17
FY16-5005-001-G003	St. Francis Hospice	08/01/2016 - 07/31/2017	R 1,360,031.00	\$ 113,336.00

ANNEX II: TB SAP INDICATORS

Indicators	Baseline
1: TB Infections Reduced	
1.1 Increased Public Awareness of the TB Epidemic	
Number of people reached with public awareness activities by type (e.g., PSAs, community outreach, etc.)	TBD
Number of people screened for TB	10,579,346
Percent of people screened for TB	33%
Number/percent screened for TB who accepted being tested for TB/ MDR TB	317,380
Number/Percent who tested for TB/MDR TB, who were TB/MDR TB positive	7731
Number/percent TB /MDR TB positive who were put on TB/MDR TB treatment	7731
1.2: Effective Implementation of Infection, Prevention and Control	
Number/Percent of facilities in compliance with national IPC standards	220
Number facilities supported with FAST	220
Number of healthcare staff trained on Infection Prevention and Control tools and approaches in project target areas	2200
Number/percent of facilities with trained staff on Infection Prevention and Control	222
Number of health care staff diagnosed for TB in project areas	N/A
1.3: Improved TB Screening among Key Populations	
Number/percent of Key Populations Screened and tested	TBD
Percent of key populations tested who are positive of TB and MDR TB	TBD
Percent of TB.MDR TB among key populations with laboratory diagnosis who are put on TB and MDR TB treatment	TBD
Percent of TB and MDR TB patients who received high-quality patient-centered care	TBD
Number/percent of MDR TB patients reporting severe side effects/adverse events	TBD
Number/percent of patients with severe side effects managed per national guidelines	TBD
Number of health care workers who trained in enhanced counselling and MDR TB side effect management	TBD
Number of interventions designed to reach key populations	TBD
Number of program managers trained in reaching key populations	TBD
2: Sustainability of Effective TB Response Systems Increased	
2.1: Strengthened Management Capacity at all Levels	
Number of districts with Strategic Plans for TB and MDR TB	22
Number/Percent of districts implementing TB and MDR TB Strategic Plans	22
Number/Percent of districts using QI and other initiatives to improve TB and MDR TB services	22
Number of managers trained in TB and MDR TB program management	22
Number/Percent of districts holding quarterly TB and MDR TB program reviews	22
2.2: Strengthened Service Delivery Capacity at all Levels	
Nu treatment	90%
Number/Percent of MDR TB cases that are cured and complete treatment	75%

Number/Percent of DS TB who are lost to follow up (LTFU) or interrupt treatment	<5%
Number/Percent of MDR TB who are lost to follow up (LTFU) or interrupt treatment	<5%
Number of diagnosed RR/MDR/XDR TB patients who initiated on SLDs	100%
Number/Percent of TB/MDR TB facilities with trained TB/MDR TB staff including counselling and management of side effects	100%
Number/Percent of nursing and medical schools integrating TB/MDR TB training modules in pre-service education programs	TBD
Number of RCTs integrating TB/MDR TB training modules in their HIV and other health training programs	9
Number of health facilities receiving mentoring and on-the-job support in the project districts	220
Number of health facilities using mHealth tools for patient management	TBD
Number of districts using mHealth tools for enhanced program management (supervisions, side effect management, etc.)	22
2.3: Improved Data Reporting and Recording Systems at all Levels	
Number/Percent of health care facilities in supported districts that meet data quality requirements	220
Number/Percent of project sites that submit reports to higher levels regularly	220
Number/Percent of facilities conducted cohort analysis to track patient retention and intermediate outcomes on a regular basis	220
Number of districts rolling out mHealth and other patient support solutions	22
Number of districts and health facility staff trained in recording/reporting and MEL functions	22
3: Care and Treatment of Vulnerable Populations Improved	
3.1: Increased Contact Tracing of Key Populations	
Number/percent of eligible index cases for who contact tracing performed	TBD
Number/percent of contacts of index cases screened	TBD
Number/percent of TB cases detected among contacts of TB index cases	TBD
Number of health facility staff trained in contact tracing	TBD
Number/percent health facilities in project support districts with functional contact tracing procedures	TBD
Number/Percent of NGOs/CSOs participating in contact tracing	TBD
3.2: Improved TB Case Management in Key Populations	
Proportion of registered TB cases with HIV or other comorbidities	61%
Number/Percent of HIV positive with TB put on ART	100%
Number/Percent of TB cases screened for DM	90%
Number/Percent of TB, MDR TB patients with side effects reported	100%
Number/Percent of TB, MDR TB patients with 1. Minor Side effect and 2. severe side effects	TBD
Number of healthcare workers trained in effective management of severe side effects and adverse events	110
3.3: Strengthened Comprehensive Systems and Partnerships for Care	
Number of private sector partners (private providers, insurance groups, pharma, employers, etc.) engaged to provide TB prevention, diagnosis and treatment services	TBD
Number of TB patients diagnosed and management in the private sector who are reported to the national TB MEL Systems	TBD