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*Applying Science to Strengthen  
and Improve Systems*

## USAID ASSIST Project

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# Swaziland Country Report FY14

**Cooperative Agreement Number:**

AID-OAA-A-12-00101

**Performance Period:**

October 1, 2013 – September 30, 2014

**DECEMBER 2014**

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This annual country report was prepared by University Research Co., LLC for review by the United States Agency for International Development (USAID). The USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project is made possible by the generous support of the American people through USAID.



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#### DISCLAIMER

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**Acknowledgements**

This country report was prepared by University Research Co., LLC (URC) for review by the United States Agency for International Development (USAID) under the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project, which is funded by the American people through USAID's Bureau for Global Health, Office of Health Systems. The project is managed by URC under the terms of Cooperative Agreement Number AID-OAA-A-12-00101. URC's global partners for USAID ASSIST include: EnCompass LLC; FHI 360; Harvard University School of Public Health; HEALTHQUAL International; Institute for Healthcare Improvement; Initiatives Inc.; Johns Hopkins University Center for Communication Programs; and WI-HER LLC.

For more information on the work of the USAID ASSIST Project, please visit [www.usaidassist.org](http://www.usaidassist.org) or write [assist-info@urc-chs.com](mailto:assist-info@urc-chs.com).

**Recommended citation**

USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project. 2014. Swaziland Country Report FY14: Published by the USAID ASSIST Project. Bethesda, MD: University Research Co., LLC (URC).

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## Abbreviations

ACSM	Advocacy, communication, and social mobilization
AIDS	Acquired immunodeficiency syndrome
ART	Antiretroviral therapy
ASSIST	USAID Applying Science to Strengthen and Improve Systems Project
BCC	Behavior change communication
CDC	U.S. Centers for Disease Control and Prevention
CPT	Cotrimoxazole prophylactic treatment
DR-TB	Drug-resistant tuberculosis
EHCP	Essential Health Care Package
FY	Fiscal year
GIS	Geographic information system
HCI	USAID Health Care Improvement Project
HCW	Health care workers
HIV	Human immunodeficiency virus
HOD	Heads of Department
HRH	Human resources for health
HTC	HIV testing and counseling
ICF	Intensified case finding
IEC	Information, education, and communication
IPC	Infection prevention and control
IPT	Isoniazid preventive therapy
IST	In-service training
LAM	Lipoarabinomannan
MDR-TB	Multidrug-resistant tuberculosis
M&E	Monitoring and evaluation
MOH	Ministry of Health
NCD	Non-communicable diseases
NCLS	National Clinical Laboratory Services
NGO	Non-governmental organization
NSP	National Strategic Plan
NTCP	National Tuberculosis Control Program
PEPFAR	U.S. President's Emergency Plan for AIDS Relief
PHC	Primary health care
Q	Quarter
QA	Quality assurance
QAP	Quality Assurance Program
QI	Quality improvement
QMP	Quality Management Program
RFM	Raleigh Fitkin Memorial Hospital
RHMT	Regional Health Management Team
SADC	Southern Africa Development Community
SNAP	Swaziland National AIDS Program
SOP	Standard operating procedures
TB	Tuberculosis
TWG	Technical working group
URC	University Research Co., LLC
URSA	University Research South Africa
USAID	United States Agency of International Development
USG	United States Government
WHO	World Health Organization

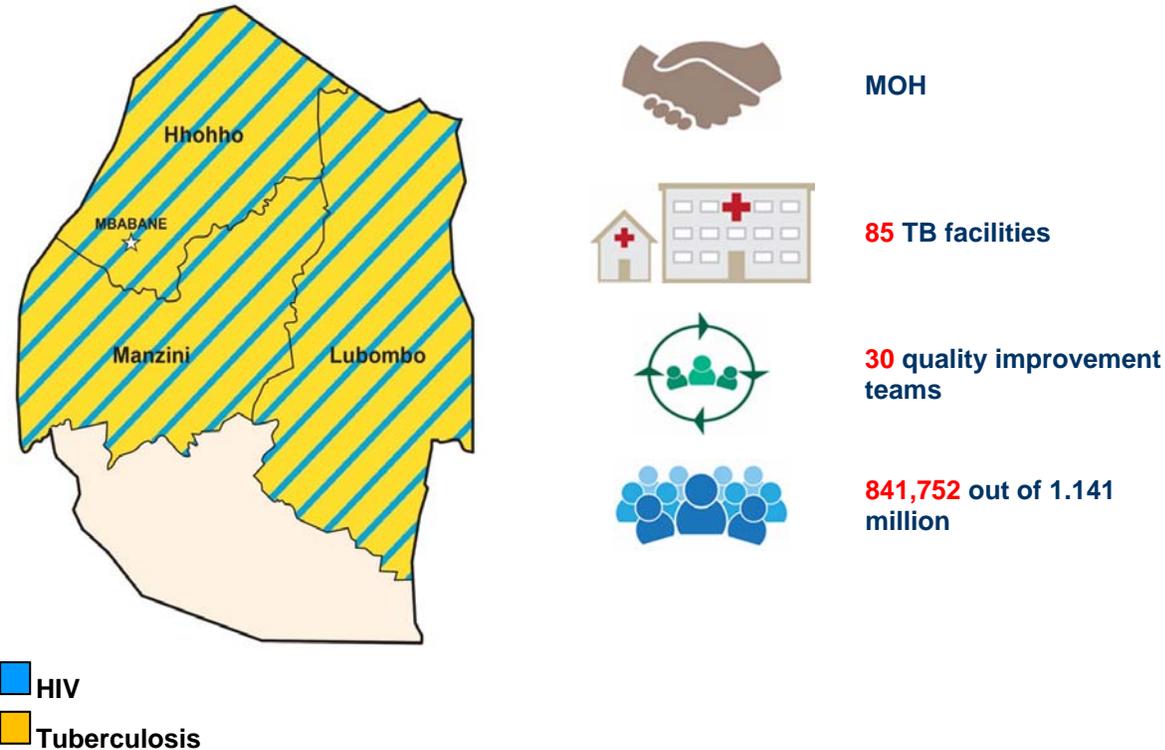
# 1 Introduction

Tuberculosis (TB) is one of the major public health problems currently confronting the Kingdom of Swaziland. Currently, the Ministry of Health (MOH) statistics show that TB accounts for approximately 10% of in-patient morbidity in the country and is responsible for 20% of in-patient deaths (NTCP Q3 report 2014). To compound this, an estimated 75% of TB-infected patients are co-infected with the human immunodeficiency virus (HIV), and 7.7% of the new TB patients and 33.9% of the previously treated TB patients have drug-resistant cases (Sanchez-Padilla, Dlamini et al. 2012). The high TB/HIV co-infection and multidrug resistance rates adversely affect TB case detection as well as treatment outcomes.

With funding from the U.S. President’s Emergency Plan for AIDS Relief (PEPFAR), the USAID Applying Science to Strengthen and Improve Systems (ASSIST) Project began working in Swaziland in October 2012. Building on the work done by the USAID Health Care Improvement (HCI) Project from 2008, ASSIST continues to support the Ministry of Health’s Quality Management Program (QMP), implementing partners, and stakeholders to institutionalize modern quality improvement in health care by: improving the national capacity to conduct quality improvement (QI) planning, implementation, and evaluation; building the capacity of health care workers and QI mentors on quality improvement; and improving health care performance measurement at national, regional, and health facility levels.

ASSIST also works with the National Tuberculosis Control Program (NTCP) and the Swaziland National AIDS Program (SNAP) to expand the coverage of integrated TB/HIV diagnosis, treatment, and care as well as improve TB outcomes. In addition, ASSIST works with stakeholders to improve the quality of TB, TB/HIV, and multidrug-resistant (MDR) TB services using modern quality improvement approaches. Through the support provided by ASSIST to the Ministry of Health through the NTCP, the SNAP, the QMP, and the Swaziland Health Laboratory Services, the project is applying lessons learned from established HIV and AIDS and TB quality improvement activities and spreading integrated service delivery models and algorithms for health facilities and providers in Swaziland.

## Scale of USAID ASSIST’s Work in Swaziland



## 2 Program Overview

Activities	What are we trying to accomplish?	At what scale?	Improvement Activity	Activity
1. Support the MOH and implementing partners to institutionalize modern quality improvement approaches	<ul style="list-style-type: none"> <li>• Improve national capacity health care QI planning, implementation and evaluation</li> <li>• Build the capacity of health care workers, and QI mentors on quality improvement</li> <li>• Improve health care QI performance measurement, at national, regional and health facility levels</li> </ul>	Countrywide (4 regions) Population: 1,141,000 85 TB diagnostic clinics		x
2. Establish integrated TB/HIV/NCD model clinics and centers of excellence for MDR-TB clinics to improve implementation of the essential health care package (EHCP)	<ul style="list-style-type: none"> <li>• Establish integrated TB/HIV/non-communicable disease (NCD) health services</li> <li>• Implement the EHCP</li> <li>• Establish the MDR-TB hospital and TB center as centers of excellence</li> </ul>	3 out of 4 regions: Hhohho Region: 3 model clinics and 4 TB/HIV comprehensive care clinics Manzini Region: 1 TB/HIV comprehensive care clinic Lubombo Region: 2 TB/HIV comprehensive care clinics  Manzini Region: TB hospital Moneni and TB center clinic Manzini	x	
3. Implement high quality DOTS expansion for TB & MDR-TB and strengthen implementation of integrated TB/HIV prevention, care, and treatment	<ul style="list-style-type: none"> <li>• Increase case detection of TB</li> <li>• Increase TB treatment success</li> <li>• Increase TB/HIV integrated management</li> <li>• Ensure proper management of MDR-TB</li> <li>• Strengthen TB infection control</li> <li>• Increase research and use of evidence in designing in priority areas interventions and policies</li> </ul>	Target population: 1,141,000 Focus regions: 3 out of 4 regions (part-time support to Shiselweni Region) Hhohho Region: 17 health facilities (2 hospitals, 2 health centers and 13 primary health clinics); population: 309,184 Manzini sub region: 12 facilities (2 hospitals, 1 specialized clinic and 9 primary health clinics); population: 352,568 Lubombo Region: 12 facilities (1 hospital, 1 health center, 3 private industrial clinics; and 7 primary health clinics); population: 180,000	x	

<p>4. Implement advocacy and social mobilization interventions to improve HIV and MDR-TB services uptake and outcomes</p>	<ul style="list-style-type: none"> <li>Strengthen the capacity of NTCP to develop and implement a TB ACSM strategy</li> <li>Improve the early detection of TB, TB/HIV and MDR-TB health facilities and communities</li> <li>Increase community engagement in support TB patient treatment adherence</li> </ul>	<p>85 health facilities in 4 regions</p>		<p>x</p>
<p>5. National framework for in-service training</p>	<ul style="list-style-type: none"> <li>Design and implement a national framework for in-service training in Swaziland</li> </ul>	<p>National: all implementing partners with in-service training programs Facility in-service training coordinators</p>		<p>x</p>

### 3 Key Activities, Accomplishments, and Results

#### **Activity 1. Support the MOH and implementing partners to institutionalize modern quality Improvement approaches**

##### **BACKGROUND**

The Quality Management Program (QMP) in the Swaziland MOH was set up to create and monitor performance standards for the delivery of health care services in Swaziland. For the last two years, the Quality Assurance Program (QAP) has established a strategy and standards for health service delivery. Using a framework that was developed in collaboration with USAID ASSIST, the program has begun scaling up quality improvement activities to all regions and health care facilities in Swaziland.

In FY13, ASSIST worked with the MOH QAP and stakeholders to finalize and disseminate strategic documents [Quality assurance (QA) strategic plan, QA standards, and standardized QI training materials] and roll out QI training. Collaborative learning sessions were established at Raleigh Fitkin Memorial (RFM) Hospital, the National TB Hospital, Piggs Peak Hospital, and TB Center at Manzini in conjunction with the MOH QAP. However, in spite of the support, there were still gaps in the coordination, implementation, and monitoring and evaluation of QA/QI interventions.

In FY14, USAID ASSIST assisted the MOH QMP and stakeholders to strengthen QA/QI implementation at all levels to contribute towards attainment of the MOH goals for the QMP, which are enshrined in the QA strategic plan: 1) Equitable care that does not vary in quality because of personal characteristics such as gender, age, physical abilities or disabilities, ethnicity, geographic location, and socioeconomic status; 2) Quality services that are available in all the regions, both in rural and urban areas; 3) Effective care that provides services based on scientific knowledge to all who could benefit and refrains from providing services to those not likely to benefit; 4) Patient/client-centered services delivered by competent, respectful staff in a language that can be understood by the patients; 5) Timely services to minimize waiting time and unnecessary delays for both those who receive and those who give care; 6) Efficient services that provide high quality care at the lowest possible cost, avoiding waste, including waste of



**Conceptual framework for Quality Management System**

human resource, equipment, supplies, ideas, energy, and prescribing unnecessary drugs or stocking more drugs, supplies, and equipment than is required; 7) Safety that ensures minimization of injuries, infections, harmful side effects, and other dangers to clients, visitors, staff, and the environment during the delivery of health care services; and 8) Continuity of care by providing full range of health services to clients and referral of cases to the appropriate level for further care with proper use of the referral system.

## KEY ACCOMPLISHMENTS

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- **Built the capacity of health care workers (HCWs) and QI mentors on quality improvement (Q1).** Conducted six facility coaching sessions to TB/HIV clinics in the Hhohho and Manzini regions with previously trained NTCP regional TB coordinators who are being mentored to serve as mentors/coaches for the TB/HIV clinics.
- **Conducted facility-based review meetings (3 facilities) (Q1)** to improve health care QI performance measurement at national, regional, and health facility levels. A total of 38 health care workers participated. QI projects included early ART initiation among HIV-infected TB patients.
- **Conducted/participated in a QA/QI training for health care workers and mentors (Q2).** The training included counterparts from the TB hospital, TB center, the Swaziland Health Laboratory Services, and the MOH QMP. The main objective of the training was to improve participant skills in identifying and utilizing quality improvement tools during coaching and mentoring of the health facilities.
- **Conducted on-site facility trainings on QA and QI (Q2).** In February 28, 2014 Good Shepherd Hospital staff in the Lubombo Region were trained on QI methodologies and supported to start their first quality improvement projects. Subsequently from March 11-13, 2014, 20 HCWs from Mbabane Government Hospital and Mahwalala Red Cross Clinic in Hhohho Region were trained on QI methodologies and approaches.
- **Supported collaborative feedback sessions at facility and regional levels (Q2).** ASSIST supported the QMP to conduct collaborative interdepartmental feedback sessions at the facility level for 10 facilities. A joint collaborative learning session was held on February 19, 2014 for the Shiswelweni Region.
- **Developed a customer satisfaction survey tool and protocol and submitted it to the Scientific Ethics Committee (Q2).**
- **USAID ASSIST in collaboration with the Quality Management Program hosted Swaziland's first ever "National Annual Health Quality Forum" (April 14, 2014).** The forum was attended by 200 participants from the regional health management teams, hospital and health center management, health care workers, and implementing partners. The objective was to share best practices of quality improvement initiatives, to provide technical updates on continuous quality improvement, and to catalyze improvements in health care using modern quality improvement/QA methodologies.
- **Conducted QA/QI training of health care workers in collaboration with the QMP (Q4):** Forty seven HCWs from Mbabane Government Hospital and Good Shepherd Hospital were provided with technical support and 13 participants were trained as trainers on QA/QI techniques. Four integrated QA/QI trainings were conducted for TB/HIV with 125 participants. Conducted Quality Management Systems training for 7 participants. Conducted collaborative sharing sessions at facility levels, regional, and national levels reaching 14 participants, 23 participants, and 212 participants, respectively. ASSIST conducted a joint QA/QI mentoring and supportive supervision with six health facilities specifically targeting QA/QI trainers.
- **Conducted an orientation workshop for customer care focal persons (July 17-18, 2014):** During the workshop, coordination mechanisms for customer care services at facilities were established; terms of reference for customer care focal persons were defined; and key components of a customer care program were discussed. Participants represented five hospitals and two health facilities.
- **ASSIST provided technical expertise to develop a national MOH customer care program framework in alignment with the national QA strategic plan (Q4).** The document aims to standardize management of the patient complaint system, suggestion box, training, feedback system, customer satisfaction survey, and key customer care indicators.

## **Activity 2. Establish integrated TB/HIV/NCD model clinics and Centers of Excellence to MDR-TB clinics to improve implementation of the essential health care package**

### **BACKGROUND**

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The Essential Health Care Package (EHCP) is one of the new MOH initiatives aimed at increasing access and equity of health services through a set of the most cost-effective, affordable, and acceptable interventions for addressing disease conditions and associated factors that are responsible for the greater part of the disease burden in Swaziland. One of the emerging non-communicable diseases in Swaziland is diabetes mellitus. Diabetes can become complicated by the presence of infectious diseases, including TB, and is a common cause for hospital admissions and lower limb amputations. Prior to FY13, the EHCP had not been implemented anywhere in Swaziland and there was no in-country experience to learn from. Starting in FY13, USAID ASSIST has provided technical assistance to roll out the EHCP in a stepwise manner while testing changes on a small scale and learning from that implementation in FY14. USAID ASSIST has piloted implementing the EHCP in three primary health clinics (model clinics) and six comprehensive care centers. The established model clinics aim to provide quality services to clients and serve as a reference for standards of care for other primary health clinics. At the model clinics, all people with TB/HIV are screened for diabetes, and people with diabetes are screened for TB/HIV at a minimum. Screening for hypertension is also conducted. Each facility was supported to reach the MOH standards for inputs (infrastructure, equipment, commodities, staffing, etc.), but not to exceed them to enable sustainability of support by the MOH.

### **KEY ACCOMPLISHMENTS**

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- **Worked to establish integrated TB/HIV/NCD Model Clinics (Q1-Q2).** Following the selection of the model clinics to implement the EHCP, the three model clinics were supported to develop work plans and start implementation of activities, which included integration of bidirectional screening for diabetes and tuberculosis, provision of integrated TB/HIV care, and integrated sexual reproductive health services [e.g., sexually transmitted infection (STI) treatment and family planning].
- **Conducted clinical mentoring visits for the three model primary health care (PHC) and the six comprehensive TB/HIV care clinics (Q2).** After a training needs assessment was conducted, onsite training in TB/HIV and intensified case-finding, isoniazid preventive therapy, and infection control (3I's) was conducted for three primary health clinics with 15 participants (May and June 2014). TB screening at two of the three model clinics is at 100%. Over the year the model clinics have each received 12 mentoring visits to strengthen the skills of the health care workers on providing integrated care. Each clinic received one supportive supervision visit per quarter to review progress and performance on implementation of the work plans.
- **Worked to establish the MDR-TB Hospital and TB Center as Centers of Excellence (COE) (Q3).**
  - Completed the assessment of the MDR-TB hospital as a center of excellence and developed a work plan to address the areas of weaknesses that were identified in the assessment.
  - The TB center received support from ASSIST to start a new quality improvement project. The performance data at the center was reviewed jointly by the TB center staff and ASSIST. Areas of weakness were identified, a root cause analysis was conducted, and an improvement plan developed. Following rotation of the staff at the TB center in September 2014, a structured orientation session was conducted for the 10 new staff. The session covered basics of TB, standard operating procedures (SOPs) for the TB center as well as the expectations and roles of the new staff. They were also introduced to quality improvement methodology.
  - The national MDR-TB hospital strategic plan was finalized in Q4.
- **Equipped hospital management with management and leadership skills (Q3).**
  - ASSIST conducted workshops to build the capacity of the hospital management and Heads of Departments to function efficiently and effectively. Key outputs of the workshop were the development of a vision for the TB center, objectives, and activities incorporated into a work plan matrix, motivating the staff to implement the work plan, and outlining corrective measures in infection control and patient management.
  - Conducted Leadership and Management Training for Better Health Outcomes (August 18-20, 2014) at the Institute of Development Management, for 16 participants from the national facilities' Heads of Departments (HODs). The training was aimed at equipping the managers and HODs

with the necessary knowledge and skills to efficiently and effectively lead and manage their teams and ensure quality DR-TB service delivery.

- **Provided support at national level to implement EHCP (Q2).** ASSIST provided technical assistance and resources to the national EHCP coordinator in order to provide oversight for implementation of the EHCP. Five hundred copies of the EHCP guideline were printed to distribute to the health care workers to implement the EHCP.
- **Development of the EHCP regional work plan (Q3).** From August 5-6, 2014, project staff working with the EHCP coordinator, EHCP national working group, and the Regional Health Management Teams (RHMTs) provided technical assistance in the development of the EHCP regional work plan. These activities facilitated identifying barriers in the implementation of the EHCP, creating awareness on RHMT roles and responsibilities in the EHCP roll-out, and identifying resources needed for implementation.
- **Integration of TB with non-communicable disease management (Q3).**
  - **Assisted the NTCP to address the integration of diabetes mellitus (DM) and TB services with the Department of Non-communicable Diseases.** The current NCD policy guidelines are being revised and will include TB/DM integration. A bi-directional TB screening concept note was developed that articulates TB screening for diabetes patients and diabetes screening among TB patients. Training for nine health facilities with 22 participants on implementing TB/DM bi-directional screening was conducted at the end of September 2014. These facilities will pilot the bi-directional screening, and lessons learned will be used to inform the scale-up.
  - **NCD coordination committee (Q4):** Participated in the national coordination forum and provided technical expertise for the integration of TB/HIV services including support to the NCD program for oversight and leadership for finalization of the NCD strategic plan and policy (July 8, 2014).

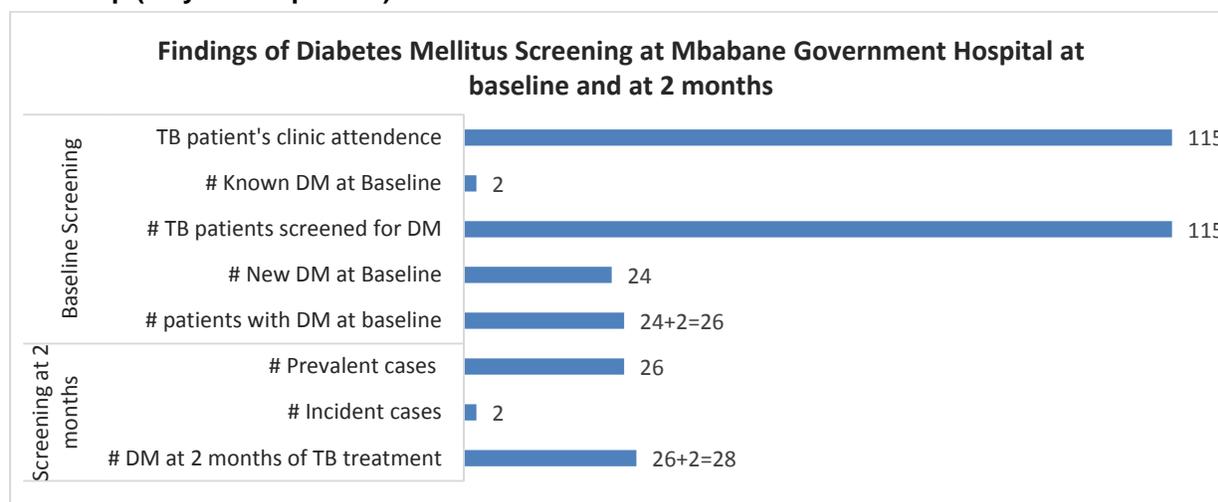
## RESULTS

### Improvement in Key Indicators

Activity	July 2014 (Baseline)	Sept 2014	Magnitude of improvement (percentage points)
<b>Bi-directional screening of TB and diabetes</b>	0% (Mbabane government hospital)	100%	100

- Figure 1 provides findings of DM screening at baseline and follow-up for Mbabane Government Hospital.

**Figure 1: Findings of diabetes mellitus screening at Mbabane Government Hospital, baseline and follow-up (July and Sept 2014)**



## SPREAD OF IMPROVEMENT

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The project uses the collaborative improvement approach to encourage sharing and learning across model clinics and comprehensive TB/HIV/NCD care clinics. RHMTs are being engaged as QI mentors so as to be able to function as extension agents for scale-up of the model clinic concept. In Q2 of FY15, ASSIST will prepare a document based on the experience in building the capacity at the three model clinics, six comprehensive centers of care, and two centers of excellence as a guide for the RHMTs and implementing partners to replicate similar models in other clinics and regions. On an ongoing basis documentation of what has worked and what did not work throughout the process is done and will serve as evidence to inform the spread.

### **Activity 3. Implement high quality DOTS expansion for TB & MDR-TB and strengthen implementation of integrated TB/HIV prevention, care, and treatment**

#### BACKGROUND

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PEPFAR and the Government of Swaziland's goal on TB is to reduce the number of deaths caused by TB and HIV by: increasing case detection of TB, increasing TB treatment success, increasing TB/HIV integrated management, and ensuring proper management of MDR-TB, while at the same time minimizing TB transmission and reducing emergence of drug resistance.

For this activity, ASSIST continued to provide technical support to the MOH, National Tuberculosis Control Program, stakeholders, and the health facilities to improve the diagnostic and treatment pathways for TB and close the leaky cascade from TB symptoms to diagnosis and treatment completion. In addition, USAID ASSIST continued to improve decentralization of TB/HIV activities towards "universal access", especially for children and earlier initiation of antiretroviral therapy (ART)-eligible patients on HIV treatment. Improving treatment success rate remained an important priority in FY14, as was expansion of TB programming into the communities with link to facilities and use of mHealth technologies, improving information systems to allow tracing of patients from "suspect" to diagnosis to treatment success, and increasing access for isoniazid preventive therapy (IPT) and infection control activities. Regarding MDR-TB, USAID ASSIST continued to improve the pathway of MDR-TB from suspicion, diagnosis, and treatment initiation; improve treatment registration and retention of MDR-TB patients; as well as strengthen MDR-TB referral systems for continuum of care between community and all levels of care, and ensure re-integration of MDR-TB patients in the community. Nosocomial transmission of tuberculosis was a major problem in Swaziland. USAID ASSIST continued to strengthen infection prevention and control practices in clinics in areas of high risk for TB transmission and develop surveillance systems to monitor TB incidence and outcomes in HCWs in conjunction with the URC/CDC laboratory technical assistance project.

#### KEY ACCOMPLISHMENTS

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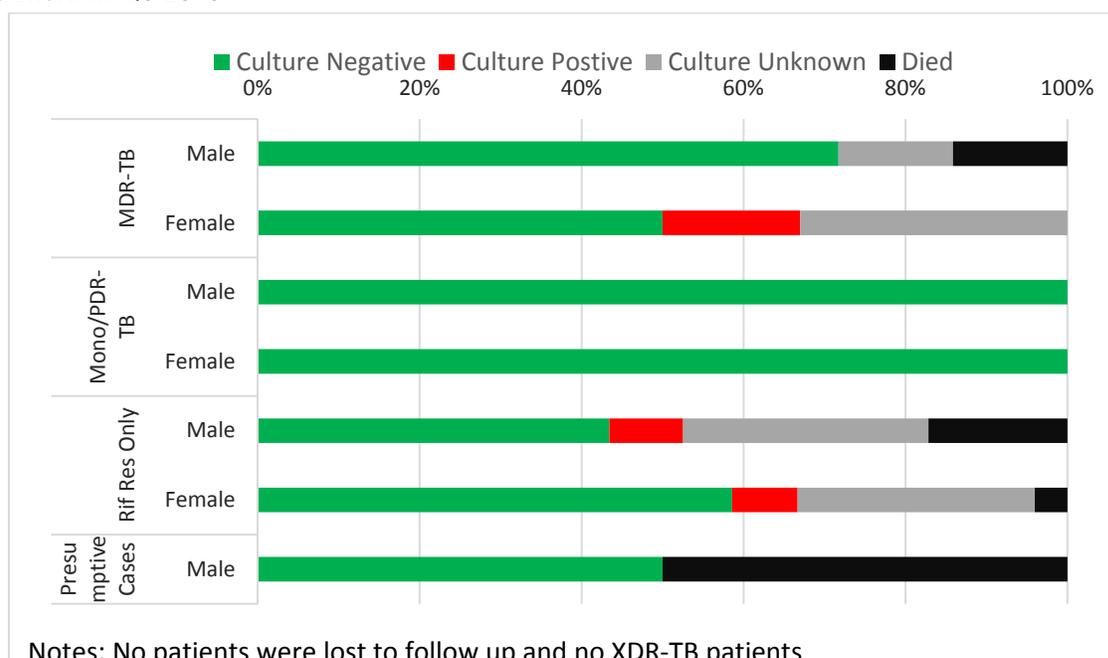
- **Development of NTCP National Strategic Plan (NSP) 2015-2019.** The project provided technical expertise and resources for the review and development of the NTCP NSP 2015-2019. This was a consultative process with all the relevant stakeholders and involved a CDC consultant. The NSP incorporated a monitoring and evaluation (M&E) plan, and costing of the plan was finalized in Q4. In Q2 NTCP staff were trained on monitoring and evaluation concepts and approaches with training outputs. M&E tools were developed to monitor the new TB NSP.
- **TB care and treatment.**
  - **Accreditation assessment for clinics to offer TB services (Q2).** ASSIST staff supported Mpaka Refugee Camp clinic – a refugee camp that houses about 200 to 300 individuals from different countries in Africa – to become accredited to become a TB treatment initiation site. Areas of improvement identified by the team included inadequate consultation rooms for TB patients, staff shortage, and poor ventilation in the facility.
  - **Community TB screening (Q2-Q4).** The project continued to support the NTCP to reach different communities, including schools, prisons, and the general public, providing health education and TB screening in order to find, test, and treat for TB.
  - **Provided technical assistance and mobilized resources to support the scale-up of TB diagnostic services (Q2).** With assistance of the CDC lab strengthening project run by URC,

five more GeneXpert machines were installed, bringing the total number of GeneXpert machines in the country to 26. Facilities have received training on using the GeneXpert machine for diagnosis, and follow-up mentoring was provided. Using the national sample transport system, all diagnostic facilities have access to GeneXpert services.

- **Conducted clinical mentoring and supportive supervision to facilities providing TB services (Q1-Q4).** Mentoring visits were conducted to 66 of the TB diagnostic facilities in the three regions. Recently appointed staff to the TB clinics were oriented on basic TB management, and subsequent mentoring visits focused on improving the quality of care for delivered for each patient. This support has enabled new HCWs to comply with TB and TB/HIV management manuals, guidelines, and SOPs.
- **The standards for TB care in Swaziland were finalized, printed, and distributed to 66 TB clinics.** The standards were adapted from the ISTC 3<sup>rd</sup> edition, the national TB guidelines, and the SADC minimum standards for TB care.
- **Provided technical support and coaching to reduce the burden of HIV in patients with presumptive and diagnosed TB** by implementing HIV prevention measures (Q3). Project staff provided clinical mentoring to TB clinics to ensure that all presumptive TB cases and TB patients know their HIV status and that co-infected TB/HIV patients are provided with cotrimoxazole preventive therapy and promptly initiated on ART with the first 2-8 weeks of TB treatment initiation.
- **Addressed private-public partnerships (Q3).** ASSIST supported the AIDS Health Care Foundation facility to establish TB/HIV integrated activities, especially the 3I's. A cough monitor has been provided to ensure TB screening is conducted for all patients; all nurses and doctors have been trained on IPT; and tools for recording and reporting have been provided. In August 2014, 15 of the facility's health care workers were trained on TB management at the facility level.
- **Addressed TB in vulnerable populations.**
  - **Continued to work with TB in the mines.** In collaboration with University Research South Africa (URSA), an advocacy activity was conducted in partnership with Ministry of Health and the Miners Association for continuation of TB care and treatment while they were on holiday in Swaziland. In December 2013, the Minister of Health met with eight current miners and 10 ex-miners to discuss challenges they face in accessing care and treatment when they come home and were provided with information resources to improve their accessibility to care and treatment.
  - **Continued to support TB screening in maternal and child health settings.** Over the last 12 months, efforts to increase TB screening have included trainings on: TB screening and provision of IPT; needs-based on-site trainings for the nurses; and follow-up clinical mentoring to increase TB case-finding among this vulnerable population.
  - **Provided support to correctional facilities (prisons) (Q2-Q3).** In March 2014, the mobile TB clinic in Matsapha prison initiated TB treatment and is refilling medication for patients who were already on treatment. The facility staff have received training to support the provision of IPT among inmates. ASSIST continues to provide support to the technical working group (TWG) for correctional services for integrated TB and HIV care.
  - **Provided technical assistance to address pediatric TB (Q1 and Q2).** Orientation on the new provider-initiated testing guidelines was conducted in TB facilities to address testing among children. Support was provided to integrate pediatric TB screening into school health, maternal and child health, and integrated management of childhood illnesses policies. The TB symptom screening questionnaire was integrated into the child health card.
- **Promoted proper management of MDR-TB.**
  - **Revised MDR-TB guidelines have been printed and are being distributed to health facilities (Q1).** On-site trainings on identifying high-risk populations for MDR-TB were conducted for 26 HCWs at 10 primary health clinics. These trainings served to increase the capacity of the HCWs to investigate high-risk patients for MDR-TB and link them to care.
  - **ASSIST staff supported the NTCP in reviewing and finalizing the training curricula for clinical management of drug-resistant TB (DR-TB) and TB/HIV management (Q3).**

- **Following annual staff rotation in facilities and printing of the new guidelines, it was imperative to provide training in TB, TB/HIV, and MDR-TB for staff in the TB clinics. Pre-service training was provided to the South African Nazarene University graduating class of midwives.** Sixty graduates were trained. An MDR-TB training was conducted in late July 2014 for 32 nurses and doctors from the eight MDR-TB facilities in the country. The main objective was to equip the participants with knowledge and skills to be able to manage DR-TB cases. A post-training feedback workshop was conducted in September 2014. Twenty-two participants shared their experiences on management of MDR-TB patients. Conducted TB/HIV training September 15-19, 2014 for 36 HCWs. They were introduced to the new TB guidelines and the changes to the management of TB/HIV co-infection. TB hospital now has a full time HIV testing and counseling (HTC) officer, and HTC uptake is now at 100%. ART initiation increased from 86% (Q2) to 89% (Q3). ASSIST continued to support the TB clinics to improvement and monitor patient management.
- **ASSIST continued to provide support to Good Shepherd Hospital (Q2) to decentralize MDR-TB initiation to peripheral sites to increase access to and retention in MDR-TB care.**
- **Project staff provided clinical mentoring to the TB Hospital to strengthen clinical management of MDR-TB (Q3).** Four doctors and 20 nurses were mentored during the quarter.
- **ASSIST supported the TB Hospital staff in development of standards of care at different departments of the hospital to improve service delivery towards making the facility a COE.** The project continued working with the lab involved in MDR case-finding to facilitate results reaching facilities and the central unit in a timely way, to reduce the turnaround time which has helped early initiation of patients. In addition, ASSIST provided resources for procurement of treatment supporter bags and medicinal bags for MDR-TB patients.
- **ASSIST staff strengthened the facility-based MDR-TB ambulatory care services and linked 59 DR-TB patients to PHC clinics for DOTS plus and continuum of care.** To improve referrals and linkages, every DR-TB patient is initiated on treatment before being referred to the lower level facilities. The PHC clinic nurse is contacted prior to the referral to ensure that the nurses at the PHC clinic are knowledgeable about MDR-TB care and are trained on DR-TB management. In cases where the nurses cannot manage MDR-TB cases, patients are then referred to their second choice PHC clinic.
- **Through the use of community care for MDR-TB patients, patients defaulting treatment are traced and brought back to care.** Home assessments are conducted, and patients with social difficulties are admitted to the hospital at least for the duration of the injectable phase. This has contributed to improved interim outcomes and treatment success rates. Over the year, 274 patients benefitted from home assessments; 76 patients who had missed clinic appointments received a home visit and were brought back to care.
- **Utilized Geographic Information System (GIS) mapping of MDR-TB patients and supporters to strengthen linkages (Q1-Q4).** To identify outbreaks/hotspots and improve patient support by clinical teams, a cumulative total of 962 drug-resistant (DR-TB) patients linked to seven DR-TB sites were identified and mapped using GIS mapping.
- **Conducted training of community treatment supporters for MDR-TB management.** ASSIST collaborated with the NTCP to conduct two trainings (August 11-15, 2014) on DR TB/HIV management for TB community treatment supporters. The first training had 34 participants (3 males and 31 females) while the second one had 40 participants (5 males and 35 females). The treatment supporters were equipped with skills and knowledge to carry out monitoring visits to MDR-TB patients at the family level. Training objectives were to: train community treatment supporters on basic facts on (DR) TB/HIV management, patient support, and DOTS; sensitize MDR-TB/HIV supporters on the identification and appropriate referral of all symptomatic contacts; and orient MDR-TB/HIV treatment supporters on infection prevention and the use of new recording and reporting tools used during patient support and DOTS.
- **Interim outcomes at six months for MDR-TB patients initiated on treatment in Q3 2013 are shown in Figure 2.**

**Figure 2: Interim outcomes at six months for MDR-TB for Q3 2014 for patients initiated on treatment in Q3 2013**



- **TB/HIV collaborative activities.**
  - **Strengthened mechanisms for delivery of integrated TB/HIV services from national to facility levels.** The project provided support for the TB/HIV National Coordinating Committee which meets quarterly to provide direction and guidance on integrated TB/HIV service delivery in the country. The four quarterly TB/HIV coordinating committee meetings focused on IPT implementation challenges and a roadmap for scale-up, developing a proposal for HIV-TB interventions for the Global Fund’s new funding mechanism, and reviewing progress of decentralization of integrated TB/HIV services..
  - **Revised and printed the TB intensified case finding (ICF) and isoniazid preventive therapy algorithms (Q3)** in response to health care worker queries on how ICF and IPT were linked as well as improve the uptake of IPT. Provision of 3I’s in public health units has been addressed through providing training for the nurses, followed by training of the managers to ensure there is oversight for the implementation of the services. Follow-up mentoring is ongoing to address the operational issues of providing the 3I’s, like successful referral for TB treatment among pregnant women diagnosed with HIV or ensuring consistent supply of isoniazid.
- **Promoted IPT for eligible people living with HIV.**
  - **The project supported an IPT cohort study in order to assess patient adherence, determining patient outcomes, identifying critical periods for future interventions, and investigating existing data collection practices in TB and ART clinics in 4 sites.** IPT data was collected in February 2014 from different hospitals in the country, and 401 patient records from centralized electronic databases were reviewed for patients initiated on IPT between September 2011 and January 2013. Tracing patient outcomes revealed that only 32% (128) of patients reviewed during the study completed treatment, while 56% (224) of patients defaulted on their course of IPT, 5% of patients were lost to follow-up, and 2% (8) transferred out. 30% of all patients with traceable default dates adhered through four months of treatment before defaulting within two months of their completion date, while 28% defaulted after their initial isoniazid prescription. On average, defaulting patients adhered to ART treatment for 18 months following their discontinuation of IPT. iv
  - **To scale up the provision of isoniazid preventive therapy for eligible people living with HIV, ASSIST conducted onsite trainings to seven primary health care clinics (Q3).** Forty-five HCWs were trained. To date, 22 facilities in three regions have been supported to provide IPT.

- **Conducted onsite training for IPT implementation** (September 2014). Eleven participants from Sigangeni Clinic and 10 from Ezulwini Satellite Clinic were trained. The training focused on capacitating facility HCWs on IPT, describing the benefit of IPT for HIV-infected persons with latent TB infection, and capacitating staff to appropriately screen eligible patients for IPT.
- **Increased research and use of evidence in designing priority areas interventions and policies.**
  - **Pediatric situational analysis on TB and MDR-TB was completed.** The analysis showed that a majority of the facilities are not following procedures for diagnosing TB in children; even when the children are diagnosed, the nurses in the clinics are unable to initiate TB treatment for the children. The nurses are still not comfortable providing comprehensive TB/HIV including MDR-TB care and treatment for children.
  - **Implementation of pediatric TB study (Q2-4).** After six months of data collection, Q4 saw the wrap-up of the pediatric TB study data collection at both sites (Piggs's Peak and Mbabane Government hospitals). The 400 participant sample size was exceeded, and 400 interviews were successfully conducted with caregivers to determine their perspectives on the pediatric sample collection methods. All collected demographic and other variables data were entered by a data clerk, and lab results data were double entered to ensure quality. Data have been cleaned and securely stored and will be analyzed in full in the first quarter of FY15 with assistance from headquarters. Data collection for the TB diagnostic study evaluating three-specimen recovery approaches (sputum extraction, gastric lavage, and urine) as well as diagnostic tools (XpertMTB/RIF, TB LAM, and blood culture) was completed. Qualitative data have been entered and cleaned, and results were presented at the National Health and Research Conference in October 2014.
- **Strengthened infection prevention and control (IPC).**
  - **The project supported and coordinated three Quality Assurance Infection Prevention and Control TWG workshops over the year.** The objectives of these meetings were to review progress on the IPC national work plan, validate the IPC manual for HCWs, and review performance on national IPC indicators.
  - **66 TB diagnostic clinics have received clinical mentoring on implementing infection control** through providing disposable masks for all patients, highlighting the open window policy, and implementing the Find TB Actively Separate Safely and Treat (FAST) strategy. Information, education, and communication (IEC) materials for TB infection control have been distributed. An assessment of the Mbabane Government Hospital was conducted.
  - **The project established a program to improve TB IPC and HIV sensitization among public transport operators.** The initial workshop conducted on March 5, 2014 aimed to provide basics of TB and raise awareness on employee wellness issues pertaining to TB. An official national launch was conducted in September 2014 with involvement of the Ministry of Health and other stakeholders.
  - **IPC focal persons training** (Feb 3-7, 2014). This training was attended by 36 representatives from the MOH and other health facilities. The key objective of the training was to capacitate health care workers on infection prevention control issues by improving their skills and knowledge.
  - **Facilitated training of pharmacists and QA and IPC focal persons from six hospitals on locally preparing the alcohol hand rub** (April 15, 2014).
  - **Feedback session for IPC focal persons post IPC basic training** was held on April 23, 2014. The participants of the basic IPC training gave feedback and shared experiences on the project assignment which was given at the end of the class session. Present were IPC focal persons were from 15 facilities.
- **Health care workers' TB screening in wellness clinics** (September 22-24, 2014). Nine participants from the new wellness clinics attended the three-day training which covered TB screening, the 3Is, DOTS, quality assurance, and monitoring and evaluation. The participants developed and presented work plans to be implemented at their respective facilities. A two-day data reporting meeting was also held during September 25-26, 2014 for the facilities that participated in the pilot. Facility-specific work plans were developed.

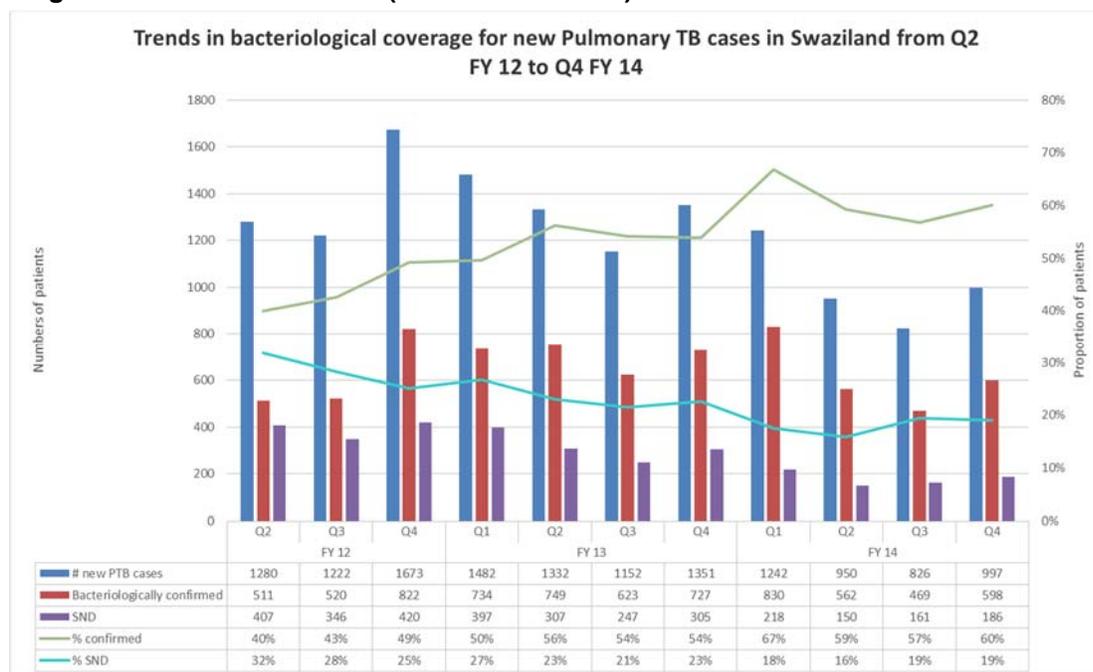
## RESULTS

**Table 1: Improvement in Key Indicators**

Activity	Indicators	Baseline (Sept 2013)	Last Value (Sept 2014)	Magnitude of Improvement (percentage points)
Implement high quality DOTS expansion for TB & MDR-TB and strengthen implementation of integrated TB/HIV prevention, care, and treatment	TB case notification	1782 (83 sites)	1324 (85 sites)	NA
	TB treatment success rate	77% (83 sites)	84% (85 sites)	7
	HTC uptake	96% (83 sites)	97% (85 sites)	1
	CPT uptake	98% (83 sites)	99% (85 sites)	1
	ART uptake	69% (83 sites)	77% (85 sites)	8
	MDR-TB case enrolment	76% (83 sites)	80% (85 sites)	4
	MDR-TB 6 months interim outcome	68% (83 sites)	61% (85 sites)	-7
	MDR-TB Treatment success rate	59% (83 sites)	60% (85 sites)	1

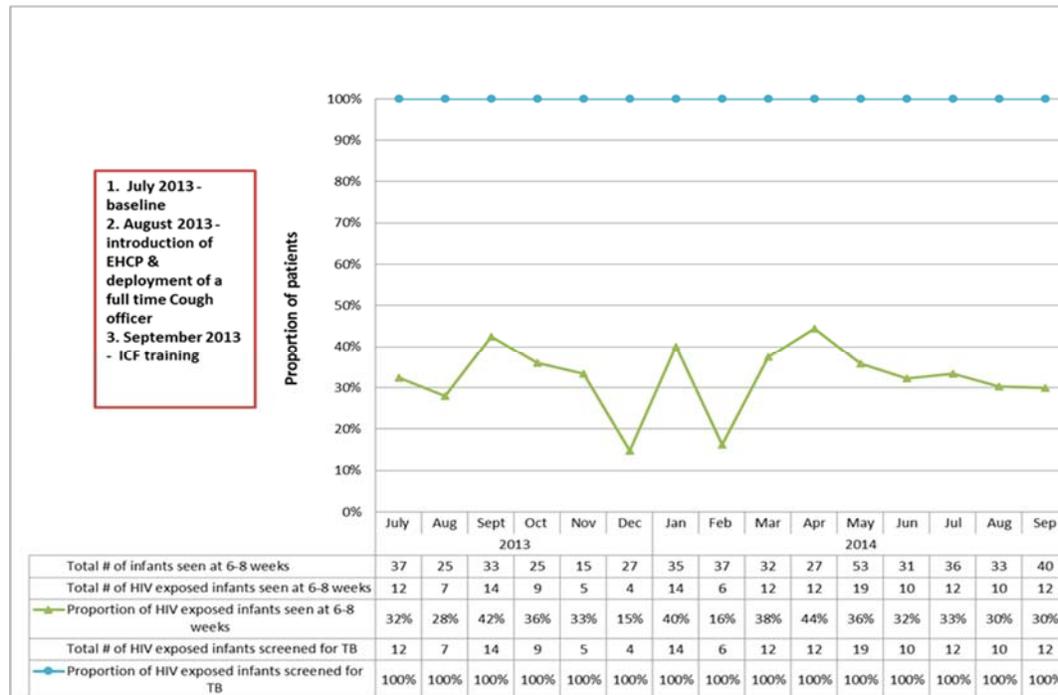
- Increased case detection of TB.** ASSIST supported the NTCP to ensure that clinics have access to quality assured bacteriology. This has contributed to the improvement in bacteriological coverage for all newly registered TB patients (Figure 3).

**Figure 3: Improving TB case detection through improving bacteriological coverage at 85 TB diagnostic units in Swaziland (Q2 FY12-Q4 FY 14)**



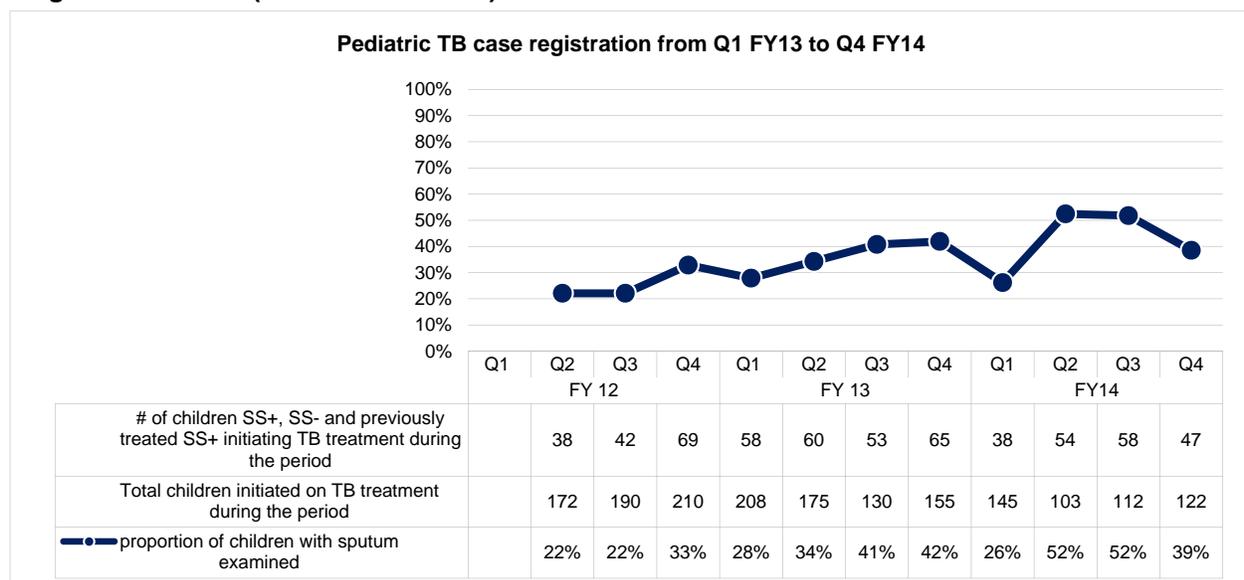
- **Strengthened TB screening and case detection among exposed infants at one of the model clinics.** During the reporting period, infants exposed to tuberculosis were prioritized for TB screening (Figure 4).

**Figure 4: TB screening of exposed infants at 6-8 weeks at the Ezulwini satellite clinic (July 2013 – Sept 2014)**



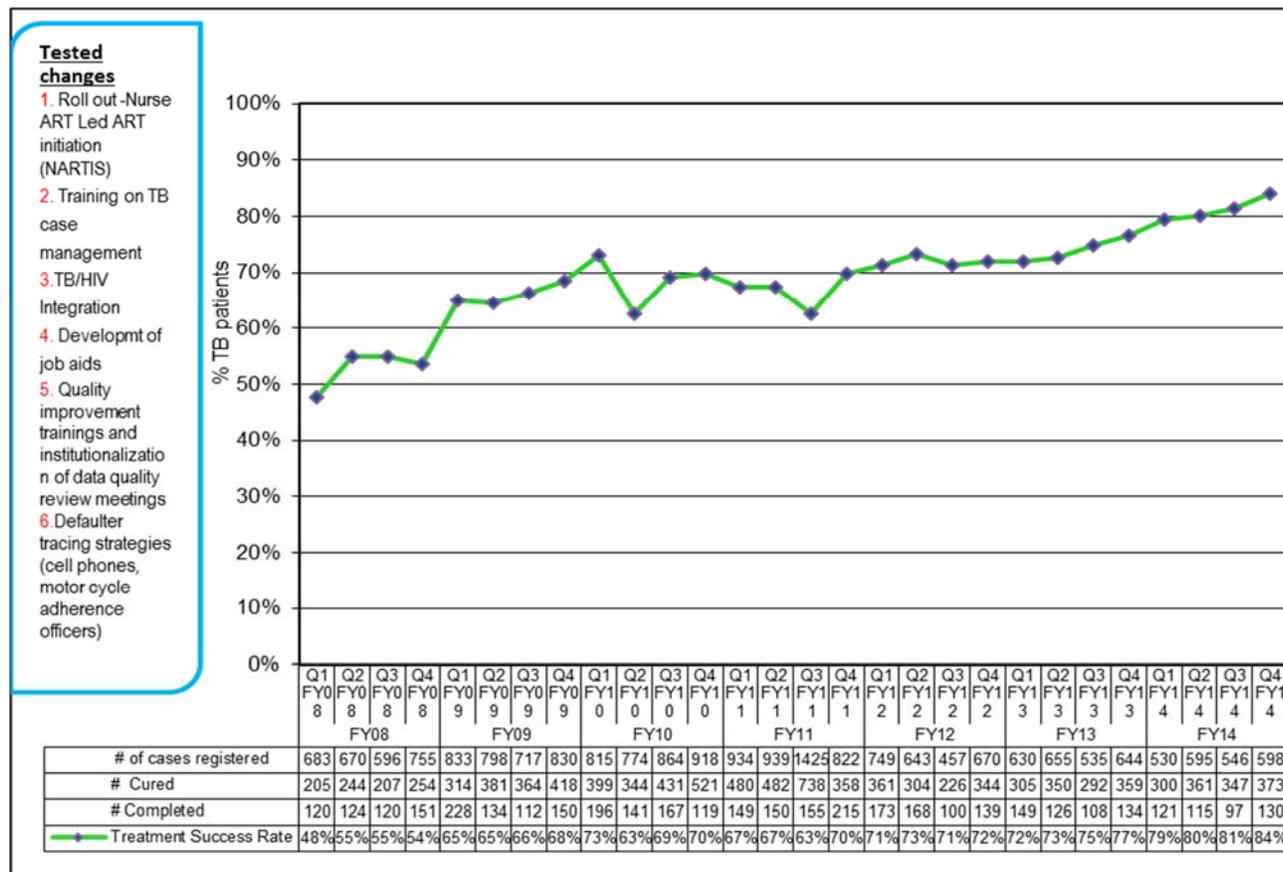
- **Increased number of children initiated on TB and sputum examined.** Technical support was provided to integrate pediatric TB screening into school health; maternal and child health; and integrated management of childhood illness policies. A TB symptom screening tool was integrated in the child health card, and trainings have been conducted on improving diagnosis of TB in children using induced sputum or gastric aspirates. Results of these efforts are shown in Figure 5.

**Figure 5: Trends in improving bacteriological confirmation of TB among pediatric TB cases, 85 TB diagnostic centers (Q2 FY12- Q4 FY14)**



- **Improved TB case finding and treatment success rate.** Ongoing clinical mentoring and supporting of quality improvement projects has contributed to the steady improvement in TB treatment success from 48% in FY08 to 84% in Q4 FY14 (Figure 6). However an ongoing decline in TB case finding is noted.

**Figure 6: Trends in National TB treatment success rates, 85 TB diagnostic centers (Q1 2008 - Q4 2014)**



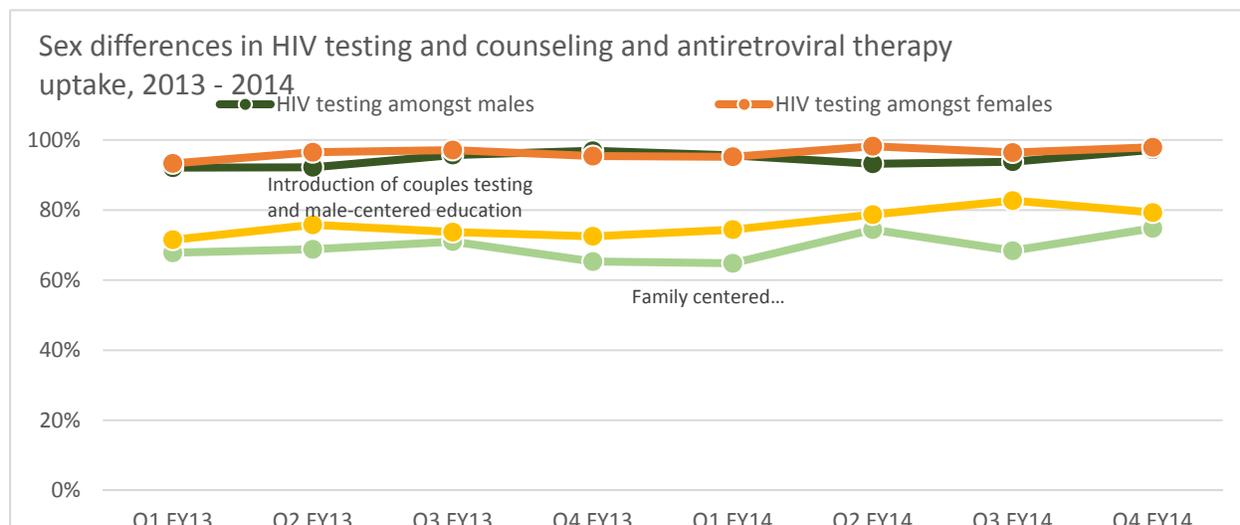
- **TB/HIV care cascade.** IPT has become a major area of intervention in the country, with ASSIST providing IPT technical assistance to both the national HIV and Tuberculosis programs. Following the IPT Indaba held in September 2013, a task group was formed to address implementation challenges. ASSIST provides technical assistance and resources to strengthen the TB/HIV care cascade in TB clinical settings. The data are disaggregated by sex and age to inform interventions that will improve TB treatment outcomes among both men and women.
- Figure 7 depicts the TB/HIV care cascade among children under five and ages 5-15 years, disaggregated by sex. As shown, ART and CPT uptake have improved among both boys and girls.

**Figure 7: Comparison of CPT and ART uptake among males and females <5 years and 5-15 years of age, 85 diagnostic sites (Q1FY13 – Q4FY14)**



- Figure 8 shows uptake of ART among co-infected men and women; more females than males accept ART. Using a family-centered approach and male-centered health messages are interventions being piloted to address this disparity.

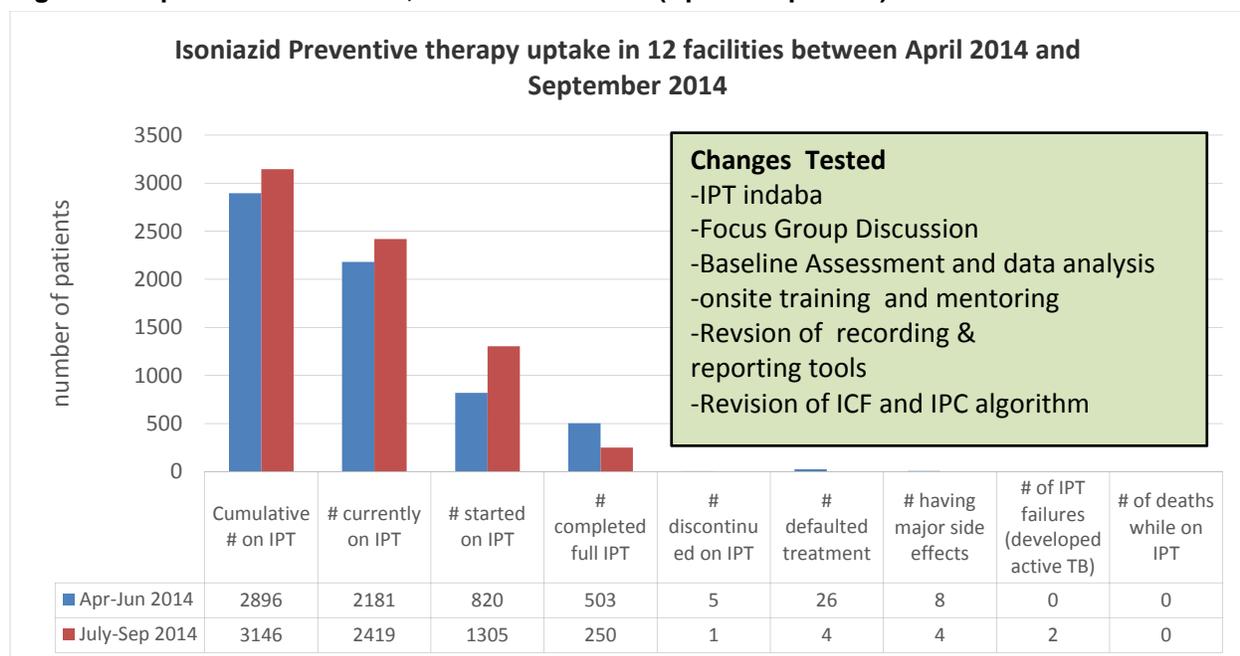
**Figure 8: Comparison of HTC and ART uptake between male and female TB/HIV co-infected patients, TB diagnostic centres (Q1 FY13 – Q4 FY14)**



**• IPT implementation for TB prevention among PLHIV at 6 comprehensive care centers.**

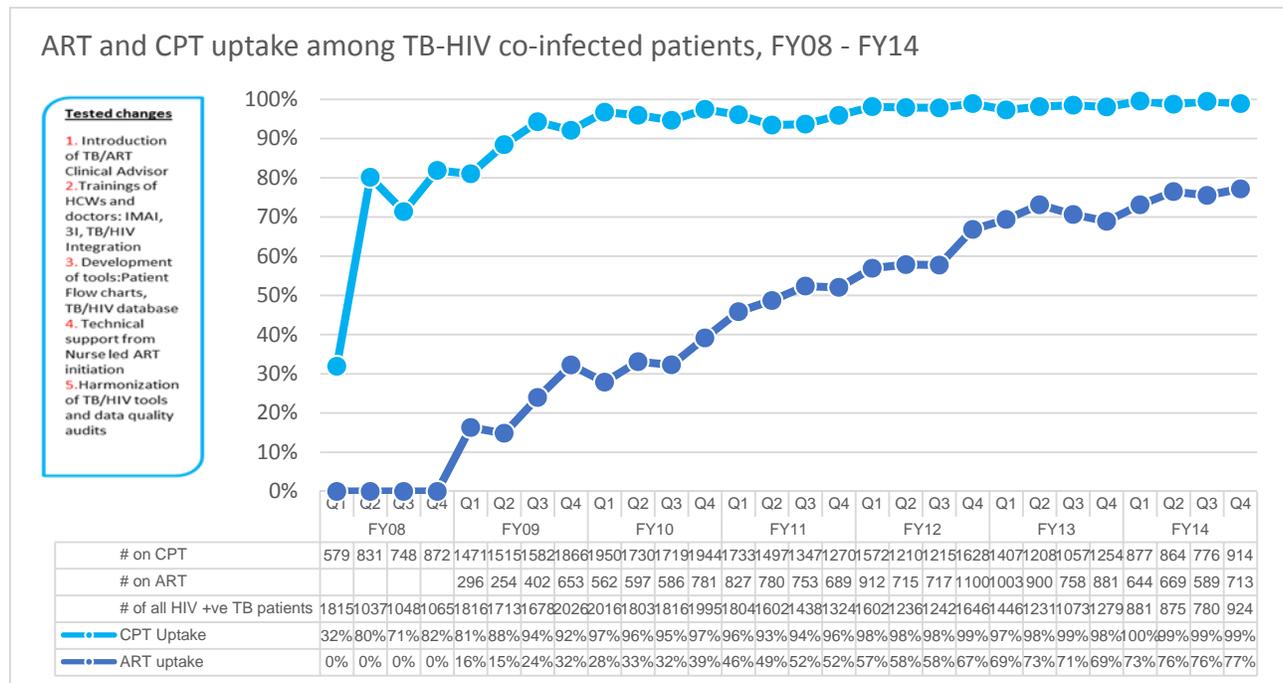
Implementation for IPT has been slow in spite of availability of IPT guidelines, isoniazid, and training of health care workers. An assessment conducted in February 2014 found that only 2% (n=90,000+) of eligible PLHIV are initiated on IPT. The main reasons were poor documentation, poor follow-up even when patients were able to honor their ART pick-up appointments, and poor communication with the central medical stores on isoniazid availability. Figure 9 shows IPT performance in 12 health facilities supported by ASSIST. Over the last five months a number of interventions have been implemented to improve IPT uptake. In Q4 a cumulative total of 3,146 patients were on IPT, of which newly initiated accounted for 1305, and the patients who completed their treatment were 250 (Figure 9).

**Figure 9: Implementation of IPT, 12 health facilities (April – Sept 2014)**

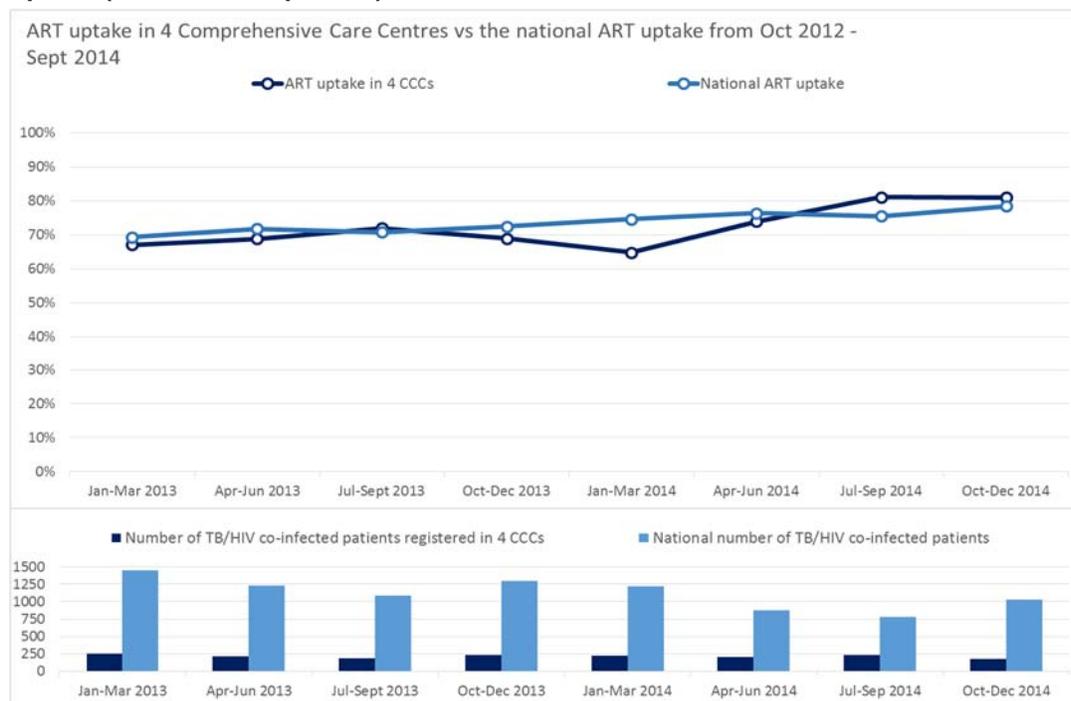


- Increase in ART and CPT uptake.** Long-term trends of increasing ART and CPT uptake among TB HIV co-infected patients are shown in Figure 10, where ART uptake increased from 0% in Q1FY08 to 77% in Q4 FY14, and CPT increased from 32% to 99% during the same time period. Figure 11 shows that ART uptake in the TB/HIV comprehensive care centers is now higher than the national rate.

**Figure 10: Trends in CPT and ART uptake among TB/HIV co-infected patients at 85 TB diagnostic centres (Q1 FY 08- Q4 FY14)**



**Figure 11: Trends in ART uptake in the 4 TB/HIV comprehensive care centers vs national ART uptake (Oct 2012 – Sept 2014)**



## SPREAD OF IMPROVEMENT

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A hybrid model that combines natural diffusion and collaborative meetings is used for the spread of innovation and best practices. ASSIST in conjunction with the NTCP and the RHMTs developed a strategic approach for joint support supervision and clinical mentoring to ensure sustainability and ownership of the activity, reduction in variation of practices, and feedback to national, regional and facility level while engaging the various levels in continuous quality improvement.

### **Activity 4. Implement advocacy and social mobilization interventions to improve HIV and MDR-TB services uptake and outcomes**

#### BACKGROUND

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This activity is being implemented at the national level and at 74 health facilities in four regions. ASSIST is providing resources and technical assistance to the NTCP and STOP TB partnership to develop a national TB advocacy, communication, and social mobilization (ACSM) strategic plan. ASSIST provided technical assistance to the NTCP to monitor the implementation of ACSM activities.

At the facility and community level, ASSIST provided resources and technical assistance to conduct community dialogues and community sensitization sessions. ASSIST is collaborating with other implementing partners to conduct TB ACSM activities.

This activity is contributing to local and global learning through the publishing of results of the knowledge, attitudes, and practice surveys conducted as well as highlighting best practices to improve ACSM implementation.

#### KEY ACCOMPLISHMENTS

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- **Worked to strengthen the capacity of the NTCP to develop and implement a TB ACSM strategy (Q1-4).** An initial draft of the ACSM strategy was developed in Q1 in conjunction with the STOP TB partnership in Swaziland. In September 2014, ASSIST, in partnership with NTCP and WHO, conducted a workshop to develop a TB ACSM strategy. The strategy focused on communication that seeks to go beyond raising awareness and has behavioral impact on the communities reached.
- **Developed, printed and distributed IEC materials and job aids on TB, TB/HIV and MDR-TB (Q2).** Printing and distribution of IEC materials - poster, banners, pamphlets, stickers, and promotional materials - were produced and distributed to encourage stopping the spread of TB as well as identifying the estimated missed 7000 TB cases in the country which need to be found, treated, and cured.
- **Conducted community mobilization/TB awareness and sensitization activities.**
  - **Conducted visits to schools, prisons, mines, military, and the police where health education and screening was provided.** In Mhlume High School in the Lubombo Region (Q1-Q2), 700 pupils received health education, and 158 children and teachers were screened for TB. Focusing on prisons, two days after the actual commemoration of World TB Day, Bhalekane Prison Farm hosted a TB Day for over 300 offenders and 50 warders.
  - **Successfully mobilized Malkerns' community members (Q2).** The activity started off with a march followed by TB education and screening. A total of 350 people visited set-up stalls, and 539 IEC materials were disseminated. By the end of the day, 213 people were screened for TB, and 95 out of the group tested positive to the screening tool.
  - **Held community dialogues in Mamisa Chiefdom in Shisweni Region (Q2).** These targeted traditional leaders who are normally the driving force in communities. The community leaders were sensitized on TB and agreed to advocate for TB initiatives in their community by encouraging people to screen for TB and seek for treatment in health facilities.
  - **Supported community mobilization for the elderly.** ASSIST supported this event which was specifically held for the elderly women on the outdoor premises of the Ngowane Clinic (Q3). This activity themed "Shukuma Gogo" (which means "Move Granny") managed to reach a total of 60 participants ages 59-89 years. Health education sessions on TB, MDR-TB, TB/HIV, NCDs, diabetes, and hypertension were conducted. All participants were screened for TB, and of those screened, 16 tested positive for TB on the symptom-based screening tool. TB and IPC IEC materials were distributed.

- **Conducted community dialogues and focus group discussions with regional health motivators (Q4).** In September 2014, the ASSIST Project conducted community health days in 11 communities. In total, 851 regional health motivators attended, 389 were tested for HIV, and 8 tested positive for HIV. During the health days, focus group discussions were conducted with regional health motivators and community leaders to collect data on the roles played by motivators in the 11 communities.
- **Conducted TB health education campaign at St. Joseph's Primary School (September 19, 2014).** 85 children (40 males and 45 females) ages 10-17 years were sensitized and screened for TB. Of those screened 22 were positive using the screening tool and were referred to St. Juliana Clinic.
- **TB screening at Maloma Mines in collaboration with URSA.** 140 miners were screened for TB, and of these, 35 are ex-miners from South African mines. Of those screened, 48 screened positive for TB, and 12 of these were ex-miners from South Africa. Spot sputum was collected from miners who had a positive result for GenXpert testing at the national laboratory. The mine clinic nurses have recently been trained by NTCP to initiate TB treatment, and the clinic is being prepared for accreditation as a TB initiating site.
- **Conducted TB screening and dissemination of behavioral change communication (BCC) materials at the Swaziland International Trade Fair (Q4).** ASSIST in collaboration with URSA took advantage of the Trade Fair to promote and sensitize the public on TB issues. On the days where the teams were at the stalls, a total of 70 people were reached. More people visited the stall collecting BCC materials.
- **Held performance feedback session with 14 health care workers (May 6, 2014, Mpolonjeni Clinic) in Hhohho Region.** The feedback session helped the team members to reflect on their performance, realize their performance gaps as a facility, and determine which areas they need to improve in their facility.
- **Participated in International Nurse's Day (May 12, 2014).** The nurses association and the ASSIST team commemorated the day by providing free health services to the public in the Mbabane City Center. The services ranged from HIV testing, basic medical check-ups, and TB screening. Sixty-seven people were screened for TB. Thirty people screened positive for TB were referred to the Mbabane Government Hospital for further management. By the end of the day, 294 BCC materials on basic facts of TB, the TB smart card, and MDR-TB were distributed.
- **Kick TB Campaign.** ASSIST collaborated with the MOH and NTCP in the Kick TB Campaign during June 2014 which was both men's health month and the FIFA world cup month in Brazil. In the campaign, ASSIST provided educational materials and radio spots on TB prevention, treatment adherence, and care.
- **Drafted and finalized the Patient Charter.** The Patient Charter was drafted in collaboration with the NTCP. The information included was guided by the WHO Patient Charter; however it was amended to suit the context of the country.
- **Launched TB IPC awareness in the public transport industry (Q4).** Sixty participants attended along with the MOH Deputy Director for Public Health. This activity included TB awareness campaigns in the four regional bus lines to sensitize the public on the basic facts of TB/HIV, TB IPC, and non-communicable diseases.

## **Activity 5. National Framework for In-service Training**

### **BACKGROUND**

Swaziland's high prevalence of HIV and AIDS and high TB/HIV co-infection rate pose challenges for the MOH Training Office because of the varied needs of the health workers with TB/HIV co-infection. Consequently, the MOH has prioritized improved pre-service training of the health workforce as well as improved in-service and continuous education in its human resource for health (HRH) plan (MOH HRH Strategic plan 2012-2017). Although in-service training (IST) interventions have been widely implemented in Swaziland, especially at the primary health care level, prior to FY14 a framework for sustainable, effective, and efficient IST was lacking in the country. System barriers to IST include: shortage of leadership staff in training and development, especially designing training systems for clinical, managerial, and academic roles required to support the HRH strategy; poor coordination among

providers; a fragmented training system with the Ministry of Public Service responsible for defining training priorities for the entire civil service and the MOH not having a role in influencing this process; duplication of training; and poor quality training. In addition, there are no data bases for tracking staff professional development and careers; there are a lack of adequate mechanisms for implementing HRH policy and procedures, fragmented frameworks and training systems to enable building staff capacity, weak coordination of training supported by donors, and limited training infrastructure and training evaluations.

In FY14, USAID ASSIST addressed the systems barriers to IST by: starting up a functional Training and Development program in the MOH that is supported by the Training Officer seconded by the Ministry of Public Service; contributing to strengthening the Training Unit in the MOH; developing and implementing an in-service training framework for a more effective, efficient, and sustainable training system that meets the needs of the MOH to deliver quality health services; and evaluating the IST framework in Swaziland.

## KEY ACCOMPLISHMENTS

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- **Presented the IST improvement framework to stakeholders (Q2)**, including the Human Resources for Health technical working group (HRH TWG), the Nursing Council, program managers, PEPFAR partners, NGOs, training institutions, and IST coordinators. As a result, the core IST improvement activities were included in the HRH TWG work plan.
- **Development of the in-service training coordination mechanism (Q3-Q4)**. In June 2014 ASSIST held a workshop to draft a mechanism for coordinating IST in the country. The mechanism provides ten steps for developing a calendar which is a tool for coordination of training among HCW training providers, provides guidelines for approval of both planned and unplanned training, and identifies the key players and their roles in coordination of training.
- **Conducted two three-day trainings in IST quality improvement (training best practices, orientation to the IST policy, and orientation to the IST improvement framework) (Q3)**. The purpose of the workshop was to familiarize facility IST coordinators and managers on concepts of quality improvement and its application to improving IST effectiveness and efficiency. Thirty-four IST quality improvement plans were developed by participants for their facilities.
- **ASSIST provided mentorship and technical assistance during the implementation of these quality improvement plans**. Provided technical support during the development of training manuals (e.g., injection safety and medical waste management, infection prevention and control). Facilitated sessions during the quality improvement training of trainers to improve the competence of trainers.
- **Conducted IST baseline survey (Q2-3)**. ASSIST developed baseline assessment tools and carried out the survey in the four regions of Swaziland targeting IST service providers, such as the MOH public health programs, training institutions, and the technical assistance partners. Key results showed that out of the 47 training providers: 34% rarely conducted a training needs assessment; 50% did not conduct training evaluations; 65% rarely engaged pre-service training providers to ensure consistency in content, approach, and methods; and 53% did not have a system to track trainees, which might have led to training the same health care workers twice.
- **Development of standard training record tools (Q4)**. In order to improve the tracking of trainings for health care workers and the training information management system in general, training recording tools were developed in September 2014.
- **Provided technical assistance in the quality management training of trainers (Q4)** where selected trainers were trained to conduct quality improvement/quality assurance training at regional level.

## 4 Sustainability and Institutionalization

ASSIST is building the capacity of the Ministry of Health Quality Assurance Program, NTCP, and SNAP managers at the central level to conduct QI planning, implementation, and evaluation and building the capacity of frontline health care workers and QI mentors in health facilities throughout the country to improve the quality of TB-HIV services and improve health care performance measurement at national, regional, and health facility levels.

The pilot and scale-up of the coordination mechanism for IST is targeting the three priority MOH public health programs that have the highest volume of trainings: National TB Program, Swaziland National

AIDS Program, and the Sexual and Reproductive Health Unit. Once these MOH programs take up the IST coordination mechanism supported by ASSIST, lessons learned from the pilot will be institutionalized in those programs, adopted as a national strategy, and spread to the other training providers within the MOH and among partners.

## 5 Research and Evaluation

- **Developing a manuscript for the baseline analysis of a study on “Injection Safety, Waste Management Practices and Related Stigma and Discrimination in Swaziland: A national assessment, exploratory study, and evaluation.”**
  - While there is substantial literature in the HIV field on stigma and discrimination from the perspective of people living with HIV, there have been fewer studies globally about health worker experiences providing HIV care, the associated stigma, and its impact on their job satisfaction and engagement in their work. Further, there is little research around injection safety and waste management in Swaziland. This study is using both qualitative and quantitative methods to explore existing practices and policies and issues of stigma and discrimination and identify opportunities for improvement in injection safety. It will also measure the impact of those improvement efforts. A concurrent transformative strategy (Creswell 2009) will be employed in which baseline data on injection safety and waste management practices and the presence and form of any related stigma and discrimination will be collected to inform the design of an improvement intervention. End-line data, also captured through mixed methods, will provide evidence of change. This study seeks to understand:
    - What type of injection safety and waste management practices and policies exist within facilities in Swaziland?
    - What type of stigma and/or discrimination do health care providers feel or express related to HIV care and treatment and other blood-borne pathogens?
    - How do improvement activities around injection safety affect HIV-related stigma and discrimination?

The expected completion date is Q1 FY15.

- **Completed data collection for a study of “Increasing diagnosis of childhood TB in Swaziland: Clinical utility and validity sample collection and diagnostic methods among children in Swaziland.”** Data analysis will be conducted November/December 2014, and the ASSIST headquarters Research and Evaluation unit will provide TA to the ASSIST Swaziland team so that they can participate in the data analysis and take a primary role in the write-up of the results.
  - There is no easy-to-use and accurate diagnostic test for TB in children, and there are difficulties in obtaining bacteriological specimens from non-sputum expectorating children. This study will compare two methods of recovery of sputum from children (mucus extractors and gastric lavage) as diagnostic aids for TB among children. The latter is more invasive while the former requires specialized equipment. The study will also compare three diagnostic technologies against the gold standard of TB sputum culture to determine clinical validity and utility of the tests among children in Swaziland (GeneXpert, Blood mycobacteria TB culture, and urine LAM). Clinical validity refers to the extent or degree to which a test accurately predicts the risk of an outcome (i.e., calibration), the accuracy with which a test identifies or predicts a patient’s clinical status, accuracy of detection of the clinical disease as well the ability of the test to separate patients with different outcomes into separate risk classes (discrimination). Clinical utility refers to the likelihood of a test to improve patient outcomes. Given that the study will compare the results from various methods of analysis of biological samples from children, the statistical analysis will be for sensitivity and specificity compared to the gold standard microscopy with sputum cultures.

## 6 Knowledge Management Products and Activities

**Newspaper articles** – ASSIST has partnered with a weekly newspaper publication called “Swazi Mirror”. This weekly publication offered space for a weekly column where weekly TB articles could be published by the weekly newspaper. A number of topics have been published since the first article was published on the 28<sup>th</sup> of June 2014. A total of 7 articles were published in FY14. In addition to

this column, the project has supported the development of TB IEC articles in other newspapers. The *Swazi Observer* published the launch of the TB Awareness Campaign in Public Transport Sector. Journalists from other media houses attended the launch and published the happenings of the event.

- **Case studies** – A total of nine case studies were drafted. Topics include: Improving in-service training in Swaziland efficiently, effectively and sustainably; mine workers registration and mapping exercise: Nkwene community experience in Shiselweni Region; assessment of hearing impairment in DR-TB patients at the National TB Hospital; bringing hope to MDR-TB patients; TB infection prevention and control in Swaziland; introducing wellness TB screening amongst health workers in Swaziland; project contribution to health system strengthening in Swaziland; community engagement and involvement in health care delivery in rural parts of Swaziland; and capacity building for M&E in this quarter. The project will finalize and disseminate these case studies in FY15.
- **ASSIST Information Packages** – The drafting process began in August. The information packages have information on all ASSIST objectives, explaining each objective and activity in detail. The package consists of a total of 8 leaflets. The target audience is the MOH, health sector stakeholders, and general public.
- **Television Interview** (talk show) - June 2014 marked the start of the FIFA World Cup and in the country the start of the Men's Health Month. Taking full advantage of these events, ASSIST collaborated in the launch of the "Kick TB Campaign", which was aimed at raising more awareness on TB to influence behavioral change, encouraging health seeking behaviour, and empowering communities. In the nation's sole TV provider, Swazi TV the team was invited to the "Kusile Talk Show" to raise public awareness about TB and promote the campaign.
- **Radio Shows** – Swaziland Broadcasting Information Services radio station availed the opportunity to promote the launch of the "Kick TB Campaign". The interview also provided the opportunity for the nation to learn more about TB. What was even more effective about this activity was that the interview was done by a political leader, the Former Deputy Prime Minister and now the Shiselweni Regional Administrator, Themba Masuku. The political leader became the driving force in pushing for more people to attend the launch of the campaign. Swaziland Broadcasting Information Services radio station also provided ASSIST the opportunity to promote the launch of the TB Awareness Campaign in the Public Transport sector. The interview was during a popular morning live radio show, called Letishisako, publicizing the event the day before the launch helped with notifying the public on the importance of being a part of the activity.
- **Radio Adverts** – As of the 20th of June, radio adverts have been running on weekdays every morning after the 7am news (peak time). The adverts on TB messages are on the following topics, Infection Prevention and Control, Symptoms of TB, Engaging Traditional Healers and finally on treatment.
- **IST Commentary** – ASSIST wrote a joint commentary on IST coordination with the MOH and submitted to the MOH directorate for approval. The manuscript of the commentary is to be submitted to the HRH journal after inputs from the ASSIST team in Swaziland and headquarters and final approval from the Swaziland MOH.
- **Blogs:** A blog entitled "[Good Timing Helps Reach the Swazi Public About TB Awareness](#)" was written and posted to the ASSIST website.

## 7 Gender Integration Activities

ASSIST worked to address gender-related challenges within the program to strengthen implementation of integrated TB/HIV prevention, care, and treatment. By analyzing the distribution of ART uptake to identify disparities, the team identified that male uptake of ART (76%) still lagged behind female uptake (82%). The team designed communication activities and materials, including the establishment of male group discussions and mixed group discussions regarding male uptake of ART. One strategy the team implemented was in the promotion and scale up of joint partner testing and family-centered approaches.

ASSIST implemented a gender-sensitive advocacy and social mobilization interventions to improve HIV and MDR-TB services uptake and outcomes. The team collaborated on the Kick TB Campaign during Men's Health Month and the 2014 FIFA World Cup Tournament in Brazil. The Kick TB Campaign educated and treated TB among men and boys – particularly among the local, vulnerable population of

miners. The ASSIST team provided educational information and offered health services and education by organizing World Cup game viewing events that men and their families could come and watch live and pre-recorded soccer matches in accessible locations. This provided the opportunity for the team to hold health promotion talks and TB screening to all in attendance. The team engaged in community dialogues with local leaders about TB, which led to their encouragement of community-wide TB awareness and treatment.

Two gender mainstreaming trainings were conducted during FY14 for health care workers, in August 2014 to Heads of Departments from the National TB hospital and in September 2014 during the Lubombo TB/HIV management training. The sessions included understanding gender; gender analysis with respect to TB/HIV (biological, sociocultural and access to and control over resources) that influence health outcomes; gender disparities existing within the Swazi context; and the relationship between abuse and the concept of power and gender-based violence. Emphasis was made into the design, implementation, monitoring and evaluation, and reporting of programs.

Sex-disaggregated and gender-sensitive indicators being collected:

- TB screening and follow-up at Ezulwini satellite clinic
- Adult TB/HIV care cascade disaggregated by sex
- Pediatric HIV/TB care cascade disaggregated by age and sex

## 8 Directions for FY15

- Test the training record tools among training providers i.e., programs, partners, facilities, and training institutions
- Present and disseminate the IST baseline assessment report
- Seek approval of the draft IST coordination mechanism for piloting
- Hire a software developer to develop the computerized training information management system
- Develop training standards
- Develop a training of trainers program to equip MOH trainers with training skills
- Conduct basic M&E, recording and reporting training for HCWs in TB clinics
- Conduct collaborative learning and sharing sessions
- Finalize and print the National TB ACSM strategy, strengthen ASCM activities for TB, TB/HIV and MDR-TB, and improve community engagement in delivery of education and treatment support
- Conduct coaching and clinical mentoring to project-supported health facilities and strengthen implementation of QI activities at supported facilities
- Strengthen integration of TB/HIV and MDR-TB at all levels and conduct relevant training
- Strengthen mechanisms for delivery of integrated TB/HIV services at all levels
- Reduce the burden of TB in people living with HIV by implementing TB prevention measures
- Reduce the burden of HIV in patients with presumptive and diagnosed TB by implementing HIV prevention measures
- Capacity building of HCWs to deliver integrated, quality TB/HIV care and treatment
- Support and participate in the national health and research conference
- Participate and present project abstracts in the TB union conference
- Finalize and print project information products (technical briefs, case studies, information packs, and success stories)
- Strengthen TB case finding, linkage to TB care, prevention and treatment, and monitoring of patient support and treatment outcomes





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University Research Co., LLC  
7200 Wisconsin Avenue, Suite 600  
Bethesda, MD 20814

Tel: (301) 654-8338

Fax: (301) 941-8427

[www.usaidassist.org](http://www.usaidassist.org)