



**World Relief Mozambique  
Vurhonga Community Based DOTS Project  
Detailed Implementation Plan**



Photo: Volunteers dance in front of a health post built by their community. Gaza Province, Mozambique

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Massangena and Massingir Districts of Gaza Province, Mozambique

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## TABLE OF CONTENTS

Acronyms.....	i
A. Technical Approach .....	1
Project Overview .....	1
Results Framework: Please see Figure 1 for the complete Results Framework. ....	1
Key Strategies and Activities .....	3
Plans for ongoing USAID Mission input throughout project implementation .....	11
Project Work Plan.....	11
B. Monitoring and Evaluation.....	12
Monitoring and Evaluation Systems .....	12
Facility Level Data Collection and Analysis .....	12
Community Level Data Collection and Analysis.....	13
Monitoring and Evaluation Table .....	13
C. Revisions .....	14
Population and Beneficiary Information .....	14
Urban Strategy (IR3) .....	14
Puppet Shows (IR 1, S.1.1 and S.3.1).....	14
Access to Testing/ Slide Fixing (IR2, S.2.2 and 2.3) .....	15
Indicator changes.....	15
D. Project Management.....	17
E. Training Plan.....	17
F. Child Survival and Health Grants Program (CSHGP) Data Form .....	17

## TABLES AND FIGURES

Table 1: Beneficiary Population by Geographic Area and Implementation Strategy.....	1
Table 2: Treatment Measures at Project, Province and National Levels .....	4
Table 3: NTP Indicators and Targets .....	12
Table 4. Revised Population Data .....	14
Table 5: Summary of indicator adjustments made since the proposal.....	15

## ANNEXES

Annex 1: Project Work Plan, A.1	
Annex 2: Monitoring and Evaluation Table, A.3	
Annex 3: Budget Information, A.8	
Annex 4: Human Resource Table, A.17	
Annex 5: Organigram, A.19	
Annex 6: Job Descriptions of Key Personnel, A.20	
Annex 7: Training Plan, A.25	
Annex 8: Baseline KPC Report, A.27	
Annex 9: CSHGP Data Form, A.87	
Annex 10: Baseline HFA, A.91	
Annex 11: Project Area Map, A.194	
Annex 12: Community Strategies, A.195	
Annex 13: Overview of Care Groups, A.197	
Annex 14: Referral Flow Chart, A.200	

## ACRONYMS

ACSM	Advocacy Communication and Social Mobilization
AIDS	Acquired Immune Deficiency Syndrome
APE	Agentes Polivalentes Elementares (Village level Community Health Workers)
BCC	Behavior Change Communication
BK-	Sputum bacteriology culture negative
BK+	Sputum bacteriology culture positive
BL	Baseline
CB-DOT	Community Based, Directly Observed Therapy
CB-DOTS	Community Based- Directly Observed Therapy Short-Course
CG	Care Group
CGV	Care Group Volunteer
C-HIS	Community Health Information System
CNR	Case Notification Rate
CPT	Cotrimoxazole Preventive Therapy
CSHGP	Child Survival and Health Grants Program
CS	Child Survival
CSP	Child Survival Project
DDS	District Department of Health
DOT	Directly Observed Therapy
DOTS	Directly Observed Therapy Short-Course, Internationally recommended strategy for TB control
DPS	Provincial Health Department
DRAT	District Rapid Assessment Tool
FHI	Family Health International
HBCA	Home Based Care Activist
HC	Health Center
HF	Health Facility
HFA	Health Facility Assessment
FHI	Family Health International
HIV	Human Immunodeficiency Virus
HP	Health Post
HQ	Headquarters
HV	Home Visitor
KPC	Knowledge Practices and Coverage
LOE	Level of Effort
M&E	Monitoring and Evaluation
MDG	Millennium Development Goals
MDR-TB	Multi Drug Resistant Tuberculosis (resistance to at least rifampin and isoniazid)
MED	Microfinance and Economic Development
MFL	Mobilizing for Life
MOH	Ministry of Health
MT	Midterm
MYFL	Mobilizing Youth for Life
NGO	Non-Governmental Organization
NTP	National Tuberculosis Program

OVC	Orphans and Vulnerable Children
PEPFAR	President's Emergency Plan for AIDS Relief
PLWHA	People Living With HIV/AIDS
PN	Pastors' Network
PNCT	National Program for Tuberculosis Control (Mozambique)
PVO	Private Voluntary Organizations
RD	Rural Districts
SS	Sputum Smear
SS+	Sputum Smear Positive
TB	Tuberculosis
TB+	Patients who test positive for tuberculosis
TB-	Patients who test negative for tuberculosis
TB-CAP	Tuberculosis Control Assistance Program
UC	Urban Centers
USAID	United States Agency for International Development
VCT	Voluntary Counseling and Testing
VHC	Village Health Committee
WHO	World Health Organization
WR	World Relief

## A. TECHNICAL APPROACH

### *Project Overview*

The project operates in six under-served, rural districts (population 218,191) and three urban areas (population 87,997) which have pre-existing World Relief (WR) volunteer structures. In the rural areas, the project builds upon WR Care Group (CG) volunteer networks and Village Health Committees (VHCs) with previous child survival experience. In the urban areas it integrates previous WR HIV/AIDS activities using existing Pastors' Networks (PNs), home based care activists (HBCAs), orphans and vulnerable children (OVC) volunteers and youth mobilization volunteers. According to Gaza estimates, with an *incidence* of sputum smear positive (SS+) tuberculosis (TB) of 186/100,000<sup>1</sup> and a combined project population of 306,188 the project could anticipate approximately 570 cases of TB per year and 2,850 SS+ patients over the life of the project.

**Table 1: Beneficiary Population by Geographic Area and Implementation Strategy**

6 Rural Care Group Districts		3 Urban Centers with HIV/AIDS Activities	
Geographic Area	Population	Geographic Area	Population
Chicualacuala	40,014	Macia Town, Bilene	24,766
Chigubo	21,309	Chokwe Town, Chokwe	63,231
Guija (including town)	77,429	Guija Town, Guija	Included in Rural Guija
Mabalane	33,248	<i>Sub-Total</i>	<i>87,997</i>
Massangena	16,225		
Massingir	29,966	<b>Total Beneficiary Population</b>	<b>306,188</b>
<i>Sub-Total</i>	<i>218,191</i>	<b>Estimated New SS+ TB Cases</b>	<b>2,850</b>

The project goal is to reduce the burden of TB, in line with the World Health Organization (WHO) Stop TB Strategy and the Mozambique National Strategic Plan. Its primary objectives are to increase the case notification rate by 50% and to achieve 85% treatment success rate in project areas fully implementing Community-Based Directly Observed Treatment Short-Course (CB-DOTS). The intermediate results are:

- IR1: Empower people with TB to seek and complete treatment, with the support of their communities. (45% effort)
- IR2: Strengthen National Tuberculosis Program (NTP) Systems to improve TB service delivery and patient outcomes. (45% effort)
- IR3: Decrease the burden of HIV in patients with TB and decrease the burden of TB in people living with HIV/AIDS (PLWHA). (10% effort)

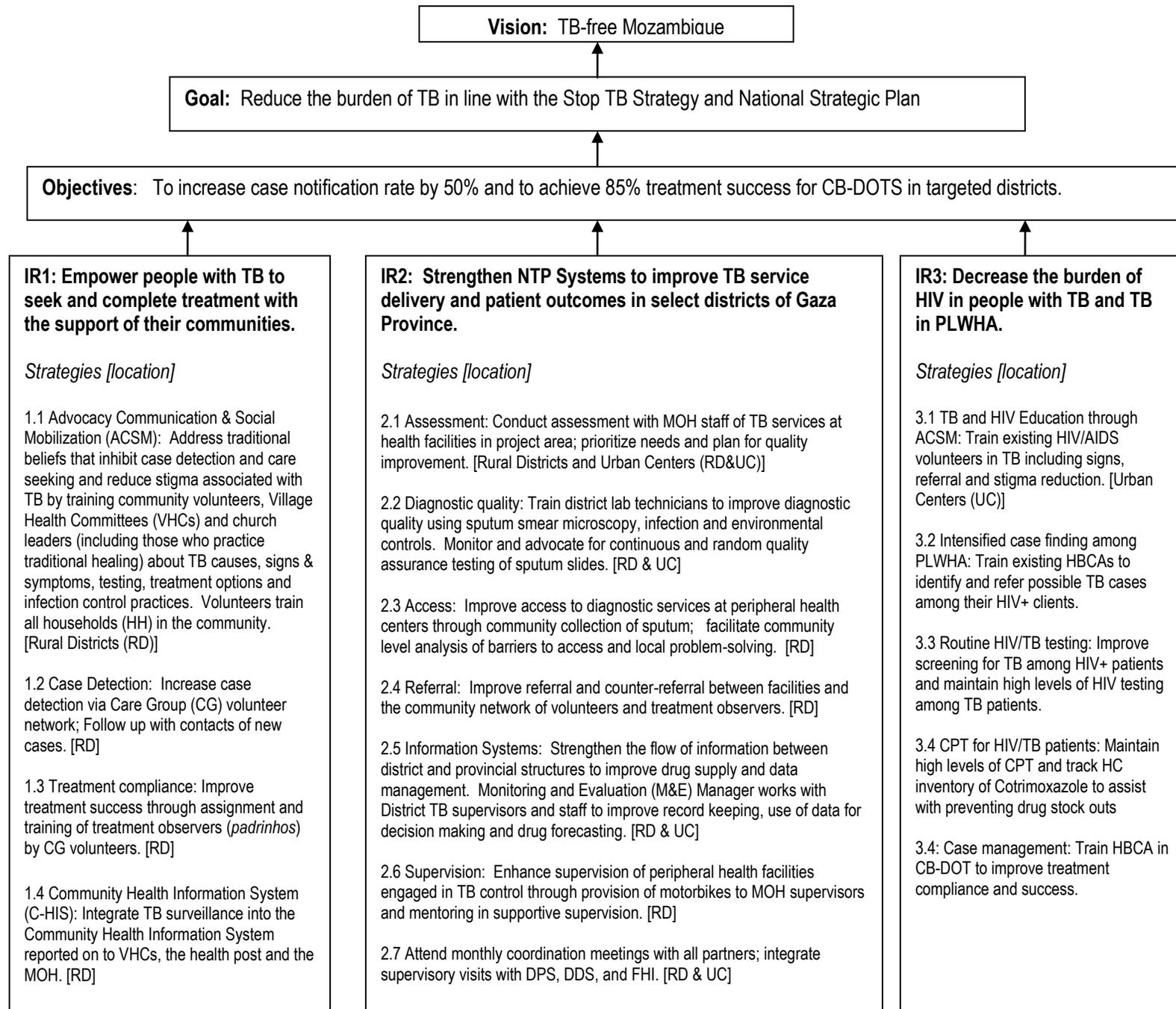
Fueled by the HIV crisis, TB is a growing health concern worldwide. The WHO ranks Mozambique 13<sup>th</sup> highest in prevalence of TB and 7<sup>th</sup> in TB mortality<sup>2</sup>. Gaza Province has specific challenges due to the high percentage of migrant workers, rural setting and long distances to health centers (HC). According to the Baseline Health Facility Assessment (HFA), half of the rural HC reported TB drug stock-outs in the previous quarter, 74.5% of SS+ TB patients are also HIV+ and the mortality rate for SS+ TB while on treatment was 14.3%. Within the project area, there are only eight health centers with the ability to diagnose and treat TB. Carmelo, a specialty HIV/TB hospital, is located in Chokwe town (see Annex 11 for a map of HC locations).

*Results Framework:* Please see Figure 1 for the complete Results Framework.

<sup>1</sup>2009 PNCT TB Report Mozambique, January 2010

<sup>2</sup> WSIS 2008

**Figure 1: Results Framework**



## *Key Strategies and Activities*

Intermediate Result 1: Empower people with TB to seek and complete treatment with the support of their communities. (45% Effort)

### **Strategy 1.1: Advocacy, Communication, and Social Mobilization (ACSM) (Rural Districts)**

- Address traditional beliefs that inhibit case detection and treatment seeking
- Reduce stigma associated with TB and address barriers to treatment seeking

**Objectives<sup>3</sup>:** Increase knowledge that TB is transmitted through the air by coughing from 20.7% to 60%  
Increase knowledge that cough longer than three weeks is a sign of TB from 13.3% to 60%  
Sustain the high percentage of respondents surveyed who know that TB is curable at 85%  
Increase knowledge that TB treatment is available for free from 39.7% at baseline to 80%  
Train 100% of CGVs in CB-DOTS  
Train 100% of functioning Village Health Committees (VHC) in TB

**Current Status:** The prevailing cultural belief that inhibits TB referral and treatment is the myth that TB is contracted and cured through cleaning rituals after death. According to the baseline (BL) KPC results, the most common response (40.0%) to how TB is transmitted was “through the death of someone”; only 22.1% responded that TB is transmitted through the air or by coughing. Recognition that a cough of long duration may be a sign of TB was also low (13.3%). However, 85.3% of those surveyed responded that TB was curable. When asked if TB medication is free of charge, 42.5% responded affirmatively. Only 25.0% of those surveyed responded that they know someone who has had TB; 27.3% believe that if someone is diagnosed with TB that they would hide it, and 29.0% responded that they feel that it is a shameful disease. For more information, see Annex 8: Baseline KPC Report

**Key Activities:** *Social mobilization* involving the entire community is essential to overcoming the prevailing belief in rural villages that TB is of supernatural origin and treatable by traditional healers. Project supervisors will rotate through each village every 6 months for two to three weeks at a time. Education topics will include TB transmission, signs and symptoms, treatment options and transmission methods. Infection control practices will also be an important education component. World Relief has developed a community-based curriculum, “Hope at Home,” that includes specific activities community members can do to prevent infection and the spread of TB (for example, safe coughing techniques, safe disposal of sputum, home ventilation) which will serve as a template for this training. CGs will also focus on stigma reduction and overcoming barriers for treatment seeking. CGVs, after working with her neighbors, will come together for CG meetings and discuss how TB is perceived in the community. As a group and under the direction of project staff, they can begin to create community specific initiatives for reducing stigma and overcoming barriers. In addition to giving educational lessons about TB, the project supervisors will review a health topic from previous child survival projects during each rotation (twice per year) in a given village to enhance sustainability and support continued positive behavior change. For a description of the CG Strategy, see Annex 12: Community Strategies and Annex 13: Overview of Care Groups.

**Role of Key Partners:** World Relief has a long history of community health work in this area and will train and interact with existing local structures and people in the community most able to sway popular understanding and opinion (e.g. CGs, VHCs, religious leaders and traditional healers).

### **Strategy 1.2: Case Detection (Rural Districts)**

- Conduct case detection via Care Group Volunteers (CGVs)

**Objectives:** Increase the quarterly case notification rate (CNR) by 50% from 110 to 165<sup>4</sup>  
Maintain the high percentage of TB suspects examined by sputum microscopy at 80%  
Increase the percentage of referrals made by CGVs from 20.6% to 60%

**Current Status:** According to the BL health facility assessment, using a modified version of the DRAT<sup>5</sup>,

annualized case notification for the rural project area was 110 per 100,000 in Q4 2009. The NTP in Gaza Province estimated an annual TB incidence rate for new SS+ cases of 186 per 100,000<sup>6</sup>, while nationally the incidence rate is estimated to be 174<sup>7</sup>. Based on the BL measurement, 83.1% of TB suspects were examined by sputum microscopy and 20.6% were referred from the local health posts. All district HCs were found to have at least one functioning microscope and either electricity or access to a generator.

**Key Activities:** Local authorities, VHCs, APEs (Mozambiquan Community Health Worker), CGs and religious leaders (including those who function as traditional healers) will be trained as trainers on the signs and symptoms of TB, how it is transmitted, and ways to prevent infection. They will learn that the project is not operating independently but is part of the National Strategic Plan for tuberculosis control, and where to go for free screening, treatment and follow-up. They will discuss perceptions of stigma and the importance of supporting family and community members to seek testing and adhere to treatment. CGVs, with the endorsement of village leaders, will help to link health facilities to the households in the community. Each CGV is responsible for visiting her group of neighboring families to be sure that every household is counseled about TB and that suspected cases report to the nearest health facility. For activities related to increasing sputum microscopy, please see Strategy 2.2. For a description of the flow of referrals and for individual roles within the structure, please refer to Annex 13: Referral Flow Chart.

**Role of Key Partners:** As with Strategy 1.1, the project will continue to work closely with influential local leaders and local organizations and will continue the partnership with APEs and the Provincial and District Ministry of Health to foster referrals and encourage sputum testing.

### Strategy 1.3: Treatment Compliance (Rural Districts)

- Improve treatment success through the training and use of treatment observers (*padrinhos*) in the community

**Objectives:** Conduct cohort analysis of treatment outcomes for SS+ patients including:

Increase the rate of treatment success from 78.6% to 85%

Maintain the high level of sputum smear conversion at 90%

Eighty-five percent of SS- patients will complete treatment<sup>8</sup>

Increase the percentage of patients on CB-DOT from 26.4% to 60%

**Current Status:**

**Table 2: Treatment Measures at Project, Province and National Levels**

Indicator	Baseline HFA/ M-DRAT	NTP data for Gaza Province <sup>9</sup>	Stop TB data for Mozambique <sup>10</sup>
Cure rate	71.4%	70.8%	78%
Treatment success	78.6%	74.1%	79%
Treatment completion	7.1%	3.3%	1%
Treatment failure	1.8%	N/A	1%
Interruption rate	3.6%	11.5%	5%
Mortality	10.7%	0.02%	10%
Transfer rate	5.4%	5.2%	5%
Percentage of patients on CB-DOT	26.4%	N/A	N/A
Sputum Smear conversion rate	86.6%	N/A	N/A

**Key Activities:** Testing for and treatment of TB requires considerable effort on the part of the patient. As the potential to default on treatment extends over six months or longer, the role of the CGV is critical. The CGV works with the patient to find a suitable *padrinho* to observe and record treatment. The CGV also gets called upon over the course of treatment should the patient not return to the health facility on schedule for drugs each month or for follow-up sputum testing at months three and five. Throughout the process, they also provide social support to the patients and *padrinhos*. WR will advocate for timely culture testing

for all potential MDR-TB cases as defined by the NTP. As the number of referrals and subsequent burden on the health centers increase, communication and coordination with the community will become increasingly important in order to maintain high rates of treatment success.

**Role of Key Partners:** Data collection for treatment outcomes will utilize HC records and will not duplicate existing systems. The project will work closely with the District TB Coordinators and the Provincial TB Manager, who was present during the BL HFA survey. There will be additional outcome and referral data collected at the village level by the Lead TB volunteer. This information will be shared with village leaders, VHCs and it will be communicated back to the MOH as well. For more information on the C-HIS, refer to Strategy 1.4 below, Section B. Monitoring and Evaluation and Annex 13: Referral Flow Chart.

#### **Strategy 1.4: Community Health Information System (Rural Districts)**

- Integrate TB surveillance into the Community Health Information System (C-HIS) reported on to VHCs, HP and MOH

**Objectives:** Eighty percent of VHCs will have local data on TB from the previous quarter  
Eighty-three percent of HCs will compile C-HIS data collected by CGVs on TB

**Current Status:** WR's census-based CG program, with its innovative C-HIS, tracks births, deaths and pregnancies at the village level and reports this data to village leadership through the VHCs and to the MOH through APEs and HP nurses. C-HIS data has alerted the District Health Department (DDS) of trends in health indicators, and helped to facilitate appropriate action at the district level.

**Key Activities:** This existing C-HIS system will be expanded upon to include data on TB referrals, diagnoses and treatment outcomes. Data from each will be aggregated at village level by the Lead TB volunteer (either the APE, HP nurse, or Lead CGV depending on the village situation), presented to the VHC and will be relayed to the MOH through the existing hierarchy. Collection of information on cases and their follow-up by the APE to the VHC provides an additional level of community awareness regarding TB and increases the community's accountability to the patients. To enhance community accountability, VHCs (including village leaders, religious leaders and traditional healers) will be trained to support and reinforce CGs and APEs through additional supervision of TB detection, surveillance, case follow-up, and data review. In addition, C-HIS data will be used by CGs and VHC to identify priorities and address problems such as detection and treatment barriers, and measure progress towards project objectives. Information collected by the C-HIS will be compared to the HC statistics and discussed at quarterly provincial meetings.

**Role of Key Partners:** As stated above, the process of collecting, analyzing and distributing the C-HIS data will be a collaborative effort involving the CGV, APE (if available), VHCs, and the MOH.

#### Intermediate Result 2: Strengthen NTP Systems to improve TB service delivery and patient outcomes. (45% Effort)

##### **Strategy 2.1: Facility Assessments (Rural Districts and Urban Centers)**

- Conduct accurate assessments of TB activities at health facilities
- Increase participation of district MOH staff in facility assessments

**Objectives:** Conduct quarterly assessments of all health centers in the project area  
One hundred percent of health center assessments will be conducted with participation from the District TB Supervisors or designated representative

**Current Status:** The DRAT tool was modified by WR to account for the local context and project indicators. It was presented to MOH leaders and Provincial TB staff for their review and further adaptation. This modified DRAT (M-DRAT) was used to perform the BL HFA conducted by the Project M&E Manager with participation from the Provincial TB Manager and the corresponding District TB Supervisor. Currently, there is not a defined tool for facility level assessments. The District TB Supervisor is responsible for the

completion and submission of required forms to the Provincial NTP, and the Provincial TB Coordinator conducts occasional supervision.

**Key Activities:** The M-DRAT will be conducted each quarter to track cohorts of TB patients as they move through the referral, diagnosis and treatment processes. This tool will also be used during the midterm (MT) and final assessments to measure progress of selected project outcomes. While indicator collection must be consistent over time, the survey will be able to be modified or expanded during the life of the project. The results from each M-DRAT will be collated and analyzed by project staff, including cross-referencing it to data collected at the village level. Such results will be presented to each HC, District TB Supervisors and routinely to the Provincial MOH. Data will also be presented to the community through CGs and VHCs.

**Role of Key Partners:** The M-DRAT will be conducted jointly by project staff and the appropriate District TB Supervisor. The Provincial TB Coordinator participated in the BL assessment and will be invited to participate in the survey used during the MT and final assessments.

### **Strategy 2.2: Diagnostic Quality (Rural Districts and Urban Centers)**

- Facilitate training district lab technicians on sputum smear microscopy to improve diagnostic quality
- Advocate for continuous, external, and random quality assurance testing of sputum slides

**Objectives:** Bring the proportion of TB suspects with SS+ confirmation in line with international standards by lowering it from 44.6% to between 10% and 25%

Maintain low proportion of major errors reported through external review at less than 1%

**Current Status:** In the previous quarter, 455 TB suspects were registered in the previous quarter, 82.2% of whom were examined with sputum microscopy. Among the slides tested, zero errors<sup>11</sup> were detected by an external review. However, only half of the HCs (including only one rural HC) sent slides for review. Of the slides sent, none of them were chosen randomly. Laboratory technician reported their last training was approximately 15 months ago.

**Key Activities:** Using MOH trainers, recommended to the project by Family Health International (FHI) the lead organization in Mozambique for the TB Tuberculosis Control Assistance Program (TB-CAP), the project will facilitate training and refresher training of district lab technicians to promote accurate laboratory assessments during years one and three. Trainings will include microscope maintenance, slide preparation and reading, and quality control. Another key component of these trainings will be appropriate infection and environmental controls in line with international standards to prevent the spread of TB to staff, patients and the community. The project will also advocate for appropriate quality protocols including the routine quality reviews for slide reading accuracy and the random selection of such slides. The primary advocacy tool will be the M-DRAT itself which continuously raises the issue of the quality review at the district level and provides evidence of current practices to the provincial level during routine reporting.

**Role of key partners:** While funding and logistical support will be provided by the project, the instruction will be led by qualified MOH TB trainers. FHI (TB-CAP) has had extensive experience providing such trainings in the region and has agreed to refer appropriate trainers with whom they have good success.

### **Strategy 2.3: Access (Rural Districts)**

- Improve access by facilitating community level barrier analysis and local problem-solving
- Improve access to diagnostic services at peripheral HFs by assisting community sputum collection

**Objectives:** Less than 10% of HFs will report sputum bottle stock-outs in the previous quarter

**Current Status:** While all of the rural health centers had sputum bottles at the time of the BL HFA, when asked about stock outs during the past quarter, 33.3% HCs reported stock outs of approximately one week each. The process for inventory and refill of sputum bottles at the HP level is uncertain except that the District TB Supervisor makes note of this during routine quarterly supervision visits.

**Key activity:** It is best for the patient to be examined and tested at the HF, to start treatment for those who are TB+, to explore other causes for those who are TB-, and for universal HIV testing for all those suspected of TB. Therefore, the project will use community structures and resources to make visiting the HC a priority among those with TB symptoms. If a referred patient is unable to travel to the HC for testing, the CGV will bring this to the attention of the VHC to address as a community what if any local assistance may be provided. This is important as TB testing and treatment is not only in the interest of the patient, but can prevent the spread of disease across the community. In unusual situations, remote testing may be required. Therefore, the project will help to monitor and track the inventory of sputum collection bottles at the HC and HP level and help supply sputum bottles when there is a shortage at the provincial and district levels. In addition, both Project Supervisors and District TB Supervisors can help to ensure transport of such samples during routine supervision visits via motorbikes provided by the project.

**Role of key partners:** VHCs and local religious organizations play a critical role in identifying those in need of assistance and arriving at creative local solutions to individual situations. They also play a key role in creating an environment of community responsibility. Community level sputum collection is a component within the current NTP. However, they report having difficulty with the inventory and supply of sputum collection bottles. WR, through its census based volunteer structure will assist the NTP in monitoring the supply of sputum bottles at the HC and HP levels and provide occasional supply to prevent stock outs.

#### **Strategy 2.4: Referral (Rural Districts)**

- Improve referral and counter-referral between facilities and the community network of CGVs and treatment observers.

**Objectives:** 75% of the patients referred from the community will be recorded at health center  
80% of TB+ patients will return to the community after receiving their diagnosis

**Current Status:** While 20.6% of HC referrals are coming from village HPs, data collection and patient follow up is limited. Currently, if a patient is referred from the community, the APE or HP nurse sends the patient with the referral form to the nearest testing facility. Once the referral form has been completed at the HF, the top half of the form stays at the HF and the patients returns home with the bottom half of the form, which is then returned to the APE/HP nurse. At present, community level tracking of individuals after they return from testing is not uniform and depends upon the individual APE or HP nurse.

**Key activities:** Working with VHCs, CGVs, and MOH staff the project will expand on the current referral and counter-referral system to ensure accurate tracking and reporting. CGVs will record information on each individual referred and follow-up with them to ensure testing. After returning from testing, the CGV goes with the patient to the nearest HP. The APE/HP nurse, the CGV and the patient decide collectively who will be the “*padrinho*” (treatment supporter) and records the information. The CGV along with the APE will train the *padrinho* on TB treatment, the importance of adherence and possible negative reactions. The APE then gives the medicine on a weekly or every other week basis to the *padrinho*. Data collection on referrals will be collated in each village by the Lead TB Volunteer and shared with local leadership, the project and the MOH. See Annex 13: Referral Flow Chart.

**Role of key partners:** Data collection on referrals will continue to be monitored at the HC level according to the MOH system; community level data collection will comply with MOH definitions and forms and will fully integrate the APE or HP nurse.

#### **Strategy 2.5: Information Systems (Rural Districts and Urban Centers)**

- Strengthen the flow of information between district and provincial structures, to improve drug supply and data management.

**Objectives:** Less than 17% of HCs reporting drug stock-outs of essential TB drugs for the last quarter

Less than 5% of those who start treatment will drop out (Interruption rate)

**Current Status:** At baseline, 50% of all rural health centers in the project area reported having stock outs of the essential TB drugs during the last quarter. One health center reported a stock out of streptomycin for 90 days; another was missing RH for 30 days, streptomycin for 60 days and RH for children for 30 days; and a third HC reported a stock out of RH for 6 days. Despite these stock outs, the interruption rate reported was 3.6% compared to district rates of 11.5% reported during 2008<sup>12</sup>.

**Key Activities and Role of Key Partners:** The Project M&E Manager will work with District TB Supervisors to improve record-keeping, train them how to make data based decisions and how to accurately predict drug needs. Helping the MOH staff manager their data to avoid treatment interruption is a significant part of the M&E Manager's role. Presentation and discussion of the frequency of stock outs will be a key factor discussed at monthly district meetings and at quarterly meetings with provincial leaders. WR will actively participate in problem solving to assist in implementing changes set forth by the NTP.

### **Strategy 2.6: Supervision (Rural Districts)**

- Enhance supervision of peripheral health facilities engaged in TB control through provision of motorbikes to MOH supervisors and modeling of supportive supervision.

**Objectives:** 85% of HPs will be visited by the District TB Supervisor during the previous quarter as reported in the M-DRAT

85% of HPs will report supervisory visits by the District TB Supervisor

**Current Status:** During the BL HFA, TB Coordinators self reported that they visited every village once during the last quarter of 2009. Despite self reporting that all villages were visited, transportation was stated as a major barrier to continuous and timely supervision of HPs by the TB Coordinator.

**Key Activities and Role of Key Partners:** The project will work with the health centers to provide or repair motorbikes for TB Coordinators to use for supervision as requested by the MOH. WR will model supportive supervision techniques to the District TB Supervisor during co-supervisory visits to HPs, VHCs and Care Groups.

### **Strategy 2.7: Coordination with NTP (Rural Districts and Urban Centers)**

- Collaborate with the NTP, TB-CAP and other partners to ensure complementary and comprehensive implementation of the National Strategic Plan for TB Control

**Objectives:** Attend 80% of meetings to which WR is invited

Conduct six joint supervisory visits to HPs each quarter

**Key Activities:** Attend scheduled coordination meetings with partners and integrate supervisory visits with the District and Provincial MOH, and FHI. Scheduled meetings include: monthly meetings with the MOH and Project Supervisors at the district level to provide feedback, plan for upcoming activities and share data collection and survey results (if applicable); quarterly meetings with the Provincial TB Coordinator and other provincial TB staff to provide feedback, compare statistics, discuss project and MOH objectives and possible improvements; bi-annual meetings with all the District TB Supervisors to review data from the previous six months and track progress over time. The project and staff will participate in other meetings as determined by the NTP, MOH, or other partners.

**Role of key partners:** Currently, the only NGO implementing TB activities in Gaza Province is FHI (TB-CAP). WR looks forward to continuing to work closely with FHI for the life of their grant and beyond.

Intermediate Result 3: Decrease the burden of HIV in people with TB and decrease the burden of TB among PLWHA. (10% Effort)

### **Strategy 3.1: TB and HIV Education through ACSM (Urban Centers)**

- Utilize existing WR HIV/AIDS programming to change beliefs and perceptions surrounding TB and HIV in the community through established church and peer social networks for advocacy

**Objectives:** Train 60 OVC and youth volunteers in TB, including in stigma reduction

Train three Pastors' Networks in TB, including in stigma reduction

**Current Status:** WR's PEPFAR funded programming (completed in 2010), includes PNs, OVC volunteers, and youth mobilization volunteers. These volunteers received extensive training in HIV education and their primary responsibility was to encourage prevention and testing among those who are HIV+. Currently, pastors involved in the HIV program through local associations called Pastors' Networks (PN) share health information to their congregants from both from the pulpit and during pastoral counseling.

**Key Activities:** ACSM strategies in the urban areas of Chokwe town, Macia town and Guija town will be implemented through the volunteer structures developed under WR's HIV activities. Annual training in TB referral and stigma reduction will be provided to OVC volunteers and youth mobilization teams who will incorporate TB messages into current HIV outreach activities. PNs will also receive training on TB. This broad team of volunteers will work in their communities for stigma reduction surrounding TB and HIV and increased awareness about TB, its signs and symptoms, and the fact that TB is curable and treatment is free. Currently, radio advertisements are playing in TB-CAP areas to expand awareness of TB and treatment options. Should funding for this no longer be available, WR will replay prepared TB radio spots. See Annex 12: Community Strategies for a broader description of WR's urban volunteer structures.

**Role of Key Partners:** The project will work closely with existing PNs, some of which are in the process of becoming locally registered CBOs. In order to continue the radio spots, FHI has given WR permission to use TB radio spots prepared by TB-CAP.

### **Strategy 3.2: Intensified TB Case Finding among PLWHA (Urban Centers)**

- Utilize existing WR HBCAs to identify potential TB cases among their HIV+ clients

**Objectives:** Train 40 HBCAs in TB case finding, referral and stigma reduction

**Current Status:** WR's HIV/AIDS programming also included HBCAs. These specialized volunteers provide social and medical care to their HIV+ clients. HBCAs have established relationships with their clients, and they have a close knowledge of their situation, family structure and beliefs. In addition to the close relationship with their clients, they hold a position of respect and authority on health. Under the MOH approved curriculum, they receive a limited amount of information about TB identification and referral and they transfer this knowledge to their clients and families.

**Key Activities:** WR will continue to work with the HBCAs by providing ongoing and enhanced education surrounding TB including how to identify and refer TB, stigma reduction and treatment compliance. These volunteers, though their unique relationship with PLWHA will provide intensified TB case finding. They will also contribute to S.3.1 by providing continuous education to their clients and families regarding both HIV and TB. As current funding for these HBCAs is uncertain, WR will support these volunteers through supervision, training and by providing small incentives to encourage them to continue caring for their individual patients. See Annex 12 for a description of WR's HIV volunteer structures.

**Role of Key Partners:** Local churches and HCs provide integral support to the HBCAs to ensure that they are well supported and that referrals are adequately documented.

### **Strategy 3.3: Routine HIV/ TB Testing (Urban Centers and Rural Districts)**

- Improve TB screening among HIV+ patients
- Maintain high levels of HIV testing among TB patients

**Objectives:** Improve the percentage of HIV+ patients screened for TB from 46.6% to 60%

Maintain high levels of HIV testing among TB patients at 95%<sup>13</sup>

**Current Status:** Nationally, 66.1% of TB patients test positive for HIV<sup>14</sup>. According to the BL HFA, the rate of HIV infection in TB patients is 74.5% with 60.8% in the rural districts and 84.4% at Chokwe and 75.7% in Macia. In the rural areas of the project almost all, 99.4% of the TB patients are tested for HIV; however, only 38.6% of HIV patients are screened for TB. When the BL survey was conducted we were informed that it was a new policy to always check the box next to TB screening that was implemented during the timeframe we were measuring. A clear distinction could be seen in the period before the policy memo when only the occasional box was checked and afterward when every box was marked as completed although more variability could be seen at the urban HCs than in the rural HCs. Therefore, it is reasonable to conclude that the screening rate in the rural HCs may not be an accurate representation of TB screening. At Chokwe, 38.2% of HIV+ patients screened for TB tested SS+, 33.7% are SS+ in Macia, while among the rural HCs only 7.6% of HIV+ patients screened tested positive for TB.

**Key Activities and Role of Key Partners:** WR will work to improve actual rates of TB screening and appropriate documentation through interaction with the NTP. As a cross reference, the project will track the number of HIV+ patients that are referred and tested for TB, as some correlation should be seen between screening and referral. As this was discovered during the BL survey the project did not anticipate this measurement; however, data was available to calculate the percentage of those HIV+ patients screened who were diagnosed with SS+ TB. The project will also conduct IEC with HIV+ patients encouraging them to go to the health center to seek treatment and community education through HBCAs as well as community wide education regarding HIV co-infection and the need for testing through CGVs.

#### **Strategy 3.4: Cotrimoxazole Prevention Therapy (CPT) (Urban Centers and Rural Districts)**

- Prevention of opportunistic infections with CPT in HIV/TB patients
- Track HC inventory of Cotrimoxazole to assist with preventing drug stock outs

**Objectives:** Maintain high levels of CPT in HIV/TB patients at 90%<sup>15</sup>

Less than 25% of HCs reporting stocks out of Cotrimoxazole in the previous quarter<sup>16</sup>

**Current Status:** The proportion of HIV/TB patients that receive at least one dose of CPT is 99.7%. This rate is similar to the 2009 findings for Gaza (98.7%<sup>17</sup>) and is in line with national policy.

**Key activities:** Opportunistic infections are particularly dangerous for TB/HIV patients. WR will work with other NGOs, including local NGOs and community groups to advocate for continued CPT availability among this high risk group. Given the BL findings demonstrating difficulties the drug supply chain, WR will monitor CPT inventory and assist the NTP with stock out prevention methods as implemented.

**Role of key partners:** As treatment regimens and medications are determined by the MOH, WR's role will be to support the activities of the NTP, District and Provincial MOH.

#### **Strategy 3.5: Case Management of Co-Infections (Urban Centers)**

- Train HBCAs in CB-DOT to improve treatment success

**Objectives:** Number of HBCAs trained on CB-DOT

**Current Status:** At present, CB-DOT training is not provided to HBCAs.

**Key activities:** In order to improve compliance with the medication regimen and improve treatment success, HBCAs will help to implement CB-DOT. With their knowledge of TB, their client and their circumstances, HBCAs can help their clients and HC staff choose an appropriate *padrinho*, train the *padrinho* (including on how to complete the forms) and provide oversight. The HBCAs also represent a link between the health center, the client and the *padrinho* to answer questions and offer support.

**Role of key partners:** WR will have routine contact with the MOH and HFs in the urban areas through the M&E Manager and project supervisors to encourage communication and participation with the HBCAs on CB-DOTS when a current HIV+ patient is diagnosed with TB.

*Plans for ongoing USAID Mission input throughout project implementation*

WR Mozambique, through the FHI (TB-CAP) sub-grant, has received multiple site visits conducted by USAID. During which WR's community TB strategies using the CG approach were praised as being a highly efficient and effective means to increase success in TB case detection and treatment. We look forward to continuing to strengthen the relationship with the USAID Mission.

*Project Work Plan*

See Annex 1 for the complete Project Work Plan.

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<sup>3</sup> Please refer to Annex 2 for a complete list of indicator definitions, all indicators will be disaggregated by gender

<sup>4</sup> The original baseline value included both new and retreatment patients, therefore, using the overall percentage of new cases being treated at the time of the survey an estimated value was calculated. The M-DRAT survey now includes a measurement of only new SS+ cases and the baseline corrected accordingly.

<sup>5</sup> The District Rapid Assessment Tool (DRAT) is a health facility assessment tool created by MCDI used to track district health center data regarding TB in line with the WHO TB Strategy.

<sup>6</sup> 2010 Mozambique NTP Estimated Case Worksheet

<sup>7</sup> Mozambique Country Profile, Global TB Control, WHO Report 2009

<sup>8</sup> No baseline value is currently available

<sup>9</sup> PNCT Report for Gaza Province 2009

<sup>10</sup> Stop TB Report, 2009 for New SS+ cases

<sup>11</sup> Please see Annex 2 for Indicator Definitions

<sup>12</sup> PNCT TB Report for Gaza 2009

<sup>13</sup> Baseline values include only SS+ TB cases. Future M-DRAT surveys will include all TB patients and the baseline adjusted accordingly.

<sup>14</sup> 2009 PNCT TB Report Mozambique, January 2010

<sup>15</sup> Baseline values include only SS+ TB cases. Future M-DRAT surveys will include all TB patients and the baseline adjusted accordingly.

<sup>16</sup> No baseline value is currently available

<sup>17</sup> 2009 PNCT TB Report Mozambique, January 2010

## B. MONITORING AND EVALUATION

### *Monitoring and Evaluation Systems*

#### Facility Level Data Collection and Analysis

At BL, TB patient records and tracking forms appeared to be thorough and well organized. Data is collated and regularly reported to the Province and there it is collated, analyzed and tracked. However, there appeared to be little analysis or tracking at the District level. In addition, data across the Province is analyzed monthly and annually without the use of cohorts and measurements of sputum smear conversion rates could not be found. WR and USAID are seeking further clarification from TB-CAP and the NTP as to how data collection and analysis are performed at the provincial and country level. For more information please see Annex \*\* for the BL Health Facility Assessment.

At the district level, the project will utilize current TB reporting and data collection structures. Through a collaborative process with the Provincial NTP and MOH leaders, the DRAT tool was modified to reflect the context in Gaza as well as to capture project indicators as described in Strategy 2.1 above. This modified DRAT was used to collect BL information and will be repeated quarterly and at the time of the MT and final assessments. Analysis of the M-DRAT is conducted with the use of an Excel spreadsheet to track results and indicators under the supervision of the M&E Manager with technical support from WR Headquarters. Data will be compared to information gathered at the community level for consistency. Following each M-DRAT, results will be shared with each HC, reported back to the Provincial NTP on a regular basis and disseminated to the community through the CGVs and VHCs. See Annex 10 for the M-DRAT survey tool and data analysis forms.

Project indicators are closely aligned with the NTP targets (see Table 3 below), with a few notable exceptions. First, the project will not have the resources to track the overall prevalence rate but will seek to improve it through community education, increased case detection and treatment compliance. Secondly, NTP tracks the case detection rate while the project will be tracking the case notification rate. In both, the numerator is the same – the number of TB cases detected. However, for the case detection rate, the denominator is expected number of cases, while for the case notification rate the denominator is the total population. Both indicators will be tracked and reported back to the District, and the NTP. Finally, it does not appear that the NTP is currently analyzing treatment outcomes for cohorts of patients entering treatment. While advocating for cohort analysis will be a critical role for the project, treatment outcomes will be analyzed according to both methodologies in an effort to provide comparable feedback to the NTP.

**Table 3: NTP Indicators and Targets**

NTP Indicator/Target
Reduce the prevalence rate of TB from 636/100,000 in 2006 to <b>390/100,000</b> in 2012
Reduce the mortality rate of TB from 12% in 2006 to <b>7%</b> in 2012 in line with MDG 6.
Increase the case detection rate from 50% in 2006 to <b>75%</b> in 2012.
Increase the treatment success rate from DOT- short course from 80% in 2006 to <b>85%</b> in 2012 in line with MDG 6.
Reduce the drop-out rate from 7% in 2006 to <b>5%</b> in 2012.

The project will seek to strengthen the current system by (a) supporting the District TB Supervisors to perform more analysis of TB data at the district level and to use the data for effective decision making, (b) to incorporate the use of cohort analysis to facilitate a more accurate determination of patient outcomes and (c) to collect and track sputum smear conversion rates as an initial indicator of treatment success. One challenge anticipated with utilizing HC's records will be the inherent conflict between recording

accurate information versus the HCs desire to ensure that the records appear complete. This can most immediately be seen in records of community supervision by the District TB Supervisors and TB screening among HIV+ patients. In this context, data collection at the community level is vital for quality assurance and independent verification of data quality.

#### Community Level Data Collection and Analysis

**Community- Health Information System (C-HIS):** Referral information, patient tracking and treatment outcome will be measured at the community level to expand upon the data collected at the HC level and to empower people within the community to be aware of current conditions and to have the ability to make decisions and changes based on that knowledge. Each village will have a Lead TB volunteer (from either the HP Nurse, APE or Lead CGV) who will be responsible for collecting information from each CG (and the HP if applicable) and recording it in the Village TB Register. While information in this book will be collected by the Project Supervisors, the actual record will remain in the community and be presented to local leaders including the VHC at scheduled meetings. Trainings and support given by the Project Supervisor will include how to read and utilize the information regarding TB in their community. This C-HIS data will be collated from every village by the Project Supervisor each quarter, and the information will be analyzed by the project and communicated back to the communities through CGVs and VHCs along with regular reporting to both the District and Provincial levels of the NTP. Information collected in the Village TB Register will very closely resemble the format and contents of the District TB Register for appropriate cross reference and integration.

**Care Group Monitoring:** In order to determine progress on the community level indicators and to track the fidelity of the Care Group Model, a twice-annual monitoring survey will be conducted. Using a monitoring system designed during past child survival projects (CSPs), one CG is randomly selected for each Project Supervisor. As the project will be phased in only CGs who have received training will be eligible for review. Project Supervisors will go to a district other than her own and interview every household reached by the selected Care Group, approximately 100 households. Information collected will include, but is not limited to, knowledge that TB is treatable, treatment is free and the frequency of household visitation. In addition, survey recipients will be asked about knowledge and behaviors emphasized in previous CSPs to monitor sustainability. The Project Supervisors are very experienced using this method and will assist the M&E team in the analysis and subsequent program implementation alterations. Monitoring results will be shared with the MOH and they can easily be adapted to reflect current interventions or needs. It is also important that the results of these surveys will be shared with the CGs, community leaders and VHCs so they can monitor progress in their community. As influential leaders, they can have a direct impact on care seeking behavior, stigma reduction and visitation rates. For additional monitoring, each Project Supervisor will be responsible for preparing a monthly report tracking their activity, including meetings attended, trainings given and topics taught.

**KPC Surveys:** KPC surveys will be conducted in the rural districts in conjunction with the BL, MT and final assessments. For the survey tool and BL results, please see Annex 8 for the BL KPC Report.

#### *Monitoring and Evaluation Table*

See Annex 2 for the complete Monitoring and Evaluation Table.

## C. REVISIONS

### *Population and Beneficiary Information*

The population data cited in the proposal for the towns of Chokwe and Macia were reflective of their entire districts, not just the urban populations. This correction decreases our total population and the expected number of TB cases. There are also minor increases in the populations of the rural districts following updated information from the Mozambique MOH. Please see the table below for the corrected information.

**Table 4. Revised Population Data**

Geographic Area	Original Population	Corrected Population
<b>Rural Care Group Districts</b>		
Chicualacuala	38,780	40,014
Chigubo	20,685	21,309
Guija (including town)	75,303	77,429
Mabalane	32,040	33,248
Massangena	15,637	16,225
Massingir	28,470	29,966
<b>Sub-Total</b>	<b>210,915</b>	<b>218,191</b>
<b>Urban Centers with HIV/AIDS Activities</b>		
Macia Town, Bilene	181,709	24,766
Chokwe Town, Chokwe	187,422	63,231
Lionde Town, Chokwe	16,000	--
Guija Town, Guija	Counted Above	Counted Above
<b>Sub-Total</b>	<b>385,131</b>	<b>87,997</b>
<b>Total Beneficiary Pop.</b>	<b>596,046</b>	<b>306,188</b>
<b>Estimated TB Cases</b>	<b>5,926</b>	<b>2,850</b>

### *Urban Strategy (IR3)*

As noted above, we are no longer counting the population in Lionde town. Our urban strategy was based on synergies with PEPFAR-funded HIV/AIDS programming in these specific sites with anticipated additional PEPFAR or other funding. However, additional funding has not yet materialized, and as the urban strategy is only 10% of our level of effort, we need to adjust urban activities and indicators to reflect what activities and M&E functions our relatively small number of TB staff members can do on their own, without working through the soon to be terminated HIV staff. For details, please see indicator changes below.

In Lionde specifically, existing HIV programming does not include HBCAs. There are only OVC and youth mobilization volunteers whose training would require additional resources and an expansion beyond the 10% level of effort (LOE) planned. Thus, we are removing Lionde's population of 16,000 from the beneficiary population count. Additional training of HC staff on topics including cross-contamination guidelines would be dependent on securing additional resources.

### *Puppet Shows (IR 1, S.1.1 and S.3.1)*

Puppet shows were listed as an innovative activity under ACSM strategies based on WR's success in other contexts. However, after exploring this option with the former CSP staff in Gaza, they recommended drama, skits and songs as being more familiar methods for community outreach. Therefore, when Project Supervisors train CGVs and HIV volunteers they will include sessions on how to create such songs and dramas. These skits will be presented at community meetings and churches based on the individual community context.

*Access to Testing/ Slide Fixing (IR2, S.2.2 and 2.3)*

The proposal was written with the intention to focus on improving access in the village via community level sputum sample collection. While this model received support from the National NTP, we received resistance from the HIV/TB specialty hospital, which requires patients to be present for physical evaluation and concurrent HIV testing. If a suspect is tested via a sample collected at the community level and tests positive, he/she will then need to go to the HC for counseling and treatment. If a suspect tests negative it is also important that they go to the HC for further follow up and diagnosis. Moreover, due to the overlap in symptoms and risks for HIV and TB, HIV testing amongst all TB referrals is crucial and only available at the health center. Therefore, WR felt compelled to expand our concept of access to include a community system for identification of those individuals who are struggling with the ability and desire to go to the health center for testing through CGVs and a forum to discuss community specific solutions for each situation through VHCs.

WR recognizes the risk that those who avoid treatment have on the health of others and that, even with the desire of the community to provide assistance; travel to the HC for testing will not be available in every case. WR will therefore work to ensure the availability of sputum collection at the community level through sputum collection bottles. We will track their availability and provide bottles during periods of stock outs. In this context, emphasis and training focusing on slide fixing at the local level will not be possible both due to level of effort as well as lack of desire to participation from local physicians and laboratory staff. In the context of community sputum collection, transport is recognized as a key issue. With their knowledge and connections with local institutions, WR will advocate for and help to identify creative solutions in order for samples to arrive at the lab in a timely manner. However, the current MOH system does not collect data regarding the date of sputum collection. Thus, accurately tracking sputum transport time is difficult. WR will continue to advocate at the provincial level for the addition of this information into their normal tracking system.

Access will be further aided by the current construction of a full hospital with laboratory and x-ray services in the town of Mapai, Chicualacuala (see Annex 11 for the Project Map). This new facility is located in a remote region of Gaza Province, reducing the transportation burden in regions of Mabalane, Chigubo, Massangena and Chicualacuala.

*Indicator changes:*

**Table 5: Summary of indicator adjustments made since the proposal**

Strategy	Proposal Indicator	Updated Indicator	Comments
S.1.1	80% of respondents know that TB is curable from the health center	92% of respondents surveyed know that TB is curable	Increased the target to 85% with the goal of maintaining this indicator at its current level; removed the clarification statement to reflect USAID guidance
S.1.1	N/A	60% of respondent surveyed know that TB is transmitted through the air by coughing	This indicator was added to track community changes in perceptions of how TB is transmitted based on need identified during the BL KPC survey
S.1.1	Number of CGVs and VHCs trained	Number of CGVs trained; Number of VHCs trained	Separated into two indicators to ease tracking and follow up
S.1.3	Percentage of patients on DOTS	Percentage of patients on CB-DOT	Clarified the measurement to better track program activities; also adjusted to include all TB patient s (SS+ and SS-)

S.1.3	Percentage of SS-TB patients completing treatment	N/A	Added per recommendation of USAID.
S.1.4	C-HIS data on TB patients detected by CGVs at district facility	C-HIS data collected by CGVs on TB is compiled at the district facility	Clarified the indicator to reflect the importance of HC interaction with C-HIS data beyond simply having the data available
S.1.4	Number of referrals for TB	N/A	This was a duplicate indicator from S.1.2
S.2.1	By EOP, 100% of district facilities are able to complete accurate assessments	100% of health facility assessments will be conducted with participation from the District TB Supervisors	As it appears that cohort analysis is not currently being performed, it seems unlikely that individual districts would continue to perform this analysis after the end of the project. Therefore, in an effort to advocate for cohort analysis WR will seek to gain full participation from the District TB Supervisors in implementation and analysis of M-DRAT data, which includes cohort analysis.
S.2.1	N/A	HFAs will be conducted quarterly	This indicator was added to ensure routine implementation of the M-DRAT
S.2.2	Proportion of TB cases with SS+ confirmation	Proportion of TB suspects with SS+ confirmation	Switched to the WHO proposed indicator for diagnostic quality to be more in line with measurements collected in the M-DRAT
S.2.3	Percentage of HFs fixing sputum to slides	N/A	Removed per description above
S.2.3	Percentage of HFs with the ability to collect and transport samples in bottles	Number of HP reporting stock outs of sputum collection bottles	Limited the scope and clarified the indicator per description above
S.2.5	Number of health facilities reporting drug stock outs in the previous month	Number of health facilities reporting drug stock outs in the previous quarter	Changed measurement from the previous month to the previous quarter to align with M-DRAT timeframes
S.2.6	Number of supervision visits made by TB supervisors to the lab and health center/post	Percentage of HP supervised by the District TB Supervisor during the last quarter as reported by the HC; percentage of HPs reporting supervisory visits by the District TB Supervisor	Based on contradictory information from conversations and interviews regarding the frequency and barriers to HP supervision, an additional indicator was added to compare visitation as reported by the HPs.
S.3.1	80% of respondents surveyed know that TB is curable with treatment from the HC	N/A	Removed indicator per description above
S.3.1	80% of respondents surveyed know that TB treatment is available for free	N/A	Removed indicator per description above
S.3.1	Number of volunteers and PNs trained	Number of HBCA, HIV and youth volunteers trained; number of PNs trained	Separated into two indicators for tracking and follow up
S.3.2	N/A	Number of HCs reporting stocks out of Cotrimoxazole in the previous quarter	Added this indicator based on BL information illustrating challenges with stock outs

S.3.3	90% of TB suspects also tested for HIV	Maintain high levels of HIV testing among TB patients	Adjusted based on high level of BL measurement of indicator, also adjusted to include all TB patients (SS+ and SS-)
S.3.4	Number of home based care recipients on CB-DOT	Number of HBCAs trained on CB-DOT	Altered indicator per description above
S.3.4	90% of TB/HIV patients on CPT	Maintain high levels of CPT in HIV/TB patients at 95%	Adjusted based on high level of BL measurement of indicator, also adjusted to include all TB patients (SS+ and SS-)

#### **D. PROJECT MANAGEMENT**

Refer to the Annexes for the following attachments:

- Human Resource Table, Annex 4
- Organigram, Annex 5

#### **E. TRAINING PLAN**

See Annex 7 for the complete project Training Plan

#### **F. CHILD SURVIVAL AND HEALTH GRANTS PROGRAM (CSHGP) DATA FORM**

Refer to Annex 9 for the completed CSHGP Data Form.

## Annex 1: Project Work Plan

Work Plan for WR TB DOTS Program in Gaza, Mozambique																			
	Year 1			Year 2			Year 3			Year 4			Year 5			Responsible			
	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023					
<b>IR1. People with TB will be empowered to seek and complete treatment with the support of their communities</b>																			
Staff recruitment	x	x	x																Project Director
Introduction of program to village/church leaders with approval letter from district administrator and MOH.		x	x																Project Director and Supervisors
TB Curriculum preparation for Supervisors to train Volunteers who will in turn train households.		x																	Project Supervisors
Accommodation arrangements for supervisors in districts/villages		x	x																Project Supervisors
Update volunteer-household census for 6 districts and update rosters of HBCAs and assigned families			x																Project Supervisors
Staff (supervisor) training on TB DOTS		x	x																Project Director
Animator/Volunteer (C/G) training on CB DOTS			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Project Supervisors
Household training on TB DOTS by volunteers			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Project Volunteers
VHC/Pastor's Network training on CB DOTS by animators or supervisors			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Project Supervisors
Referral of suspected TB patients to the nearest TB health facility			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Project Volunteers
CGV facilitate the selection of padrinhos and monitor progress during the course of treatment for active TB patients in their area			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Project Volunteers
Training for general community awareness, dispelling myths			x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	x	Project Supervisors
<b>IR2. Strengthen the NTP systems to improve TB service delivery and patient outcomes</b>																			
Introduction of program to provincial and district MOH directors as well as district administrators. Mini workshop for stakeholders, MOH for DRAT.	x	x																	Project Director Project Manager M&E Manager
Procurement of M/bikes and lab equipment for districts			x	x															Project Manager
MOH district supervisor training on CB DOTS			x																Provincial TB Representative M&E Manager
MOH lab technician training on TB DOTS, co-infection with HIV				x					x										Provincial MOH Lab Rep. Provincial TB Representative
<b>IR3. Implement integrated TB/HIV activities aimed to address high co-infection rates</b>																			
HIV/AIDS program volunteer training on CB DOTS, CPT uptake			x			x			x					x					M&E Manager Project Manager Project Supervisor



## Annex 2: Monitoring and Evaluation Table and Indicator Definitions

Strategy	Location	Indicator	Source/ Measurement	Frequency	Baseline				Target
					Numerator	Denominator	Percent/Total	95% CI	
IR1: Empower people with TB to seek and complete treatment, with the support of their communities (45% effort)									
S.1.1: ACSM	RD	Percentage of respondents surveyed know that TB is transmitted through the air by coughing	KAP Survey Project Records	BL, ME, FE Twice Annually	62	300	20.7%	12.0%- 29.4%	60%
		Percentage of respondents surveyed know that cough longer than three weeks is a sign of TB	KAP Survey Project Records	BL, ME, FE Twice Annually	40	300	13.30%	8.9%- 17.8%	60%
		Percentage of respondents surveyed know that TB is curable	KAP Survey Project Records	BL, ME, FE Twice Annually	256	300	85.3%	80.0%- 90.7%	85%
		Percentage of respondents surveyed know that TB treatment is free	KAP Survey Project Records	BL, ME, FE Twice Annually	119	300	39.7%	31.2%- 48.1%	80%
		Percentage of volunteers trained	Project Records	Quarterly	N/A	N/A	N/A	N/A	100%
		Percentage of functioning VHCs trained	Project Records	Quarterly	N/A	N/A	N/A	N/A	100%
S.1.2: Case Detection	RD	Case Notification Rate <i>*Est. % new cases from total, will update for 1st AR</i>	M-DRAT	Quarterly	60	218,191	110.0	N/A	165.0
		Percentage of TB suspects examined by sputum microscopy	M-DRAT	Quarterly	113	136	83.1%	N/A	80%
		Percentage of referrals received from volunteers	M-DRAT	Quarterly	28	136	20.6%	N/A	60%
		Percentage of referrals made by volunteers	Project Records	Quarterly	N/A	N/A	N/A	N/A	60%
S.1.3: Treatment Compliance  S.1.3, 2.5	RD	Cohort analysis for treatment outcomes of SS+ patients							
		Treatment success	M-DRAT	Quarterly	44	56	78.6%	N/A	85%
		Cure rate	M-DRAT	Quarterly	40	56	71.4%	N/A	-
		Treatment completed	M-DRAT	Quarterly	4	56	7.1%	N/A	-
		Treatment failure	M-DRAT	Quarterly	1	56	1.8%	N/A	-
		Interruption rate	M-DRAT	Quarterly	2	56	3.6%	N/A	<2%
		Mortality rate	M-DRAT	Quarterly	6	56	10.7%	N/A	<7%
		Transfer rate	M-DRAT	Quarterly	3	56	5.4%	N/A	-
		Percentage of SS- patients successfully completing treatment	M-DRAT	Quarterly	N/A	N/A	N/A	N/A	85%
		Percentage of patients on CB-DOT	M-DRAT	Quarterly	38	144	26.4%	N/A	60%
Sputum smear conversion	M-DRAT	Quarterly	84	97	86.6%	N/A	90%		
S.1.4: C-HIS	RD	Percentage of VHCs with local data on TB in the previous quarter	Project Records	Quarterly	N/A	N/A	N/A	N/A	80%
		Percentage of HCs that compile C-HIS data collected by volunteers on TB	Project Records	Quarterly	N/A	N/A	N/A	N/A	83%

IR2: Strengthen National Tuberculosis Program (NTP) Systems to improve TB service delivery and patient outcomes (45% effort)									
S.2.1:Assessment	RD & UC	Percentage of health center assessments conducted quarterly	M-DRAT	Quarterly	8	8	100.0%	N/A	100%
		100% of health center assessments will be conducted with participation from the District TB Coordinators or designated representative	M-DRAT	Quarterly	8	8	100.0%	N/A	100%
S.2.2: Diagnostic Quality	RD & UC	Proportion of major errors	M-DRAT	Quarterly	0	40	0.0%	N/A	<1%
		Proportion of TB suspects with SS+ confirmation (WHO)	M-DRAT	Quarterly	203	455	44.6%	N/A	10-25%
S.2.3: Access	RD	Percentage of HFs reporting sputum bottle stock outs in the previous quarter	Project Records	Quarterly	N/A	N/A	N/A	N/A	<10%
S.2.4: Referral	RD	Percentage of referred patients from the community recorded at the health center level	M-DRAT Project Records	Quarterly	N/A	N/A	N/A	N/A	75%
		Percentage of TB+ patients that returned to the community	M-DRAT Project Records	Quarterly	N/A	N/A	N/A	N/A	80%
S.2.5: Info Systems	RD & UC	Percentage of HC reporting drug stock outs in the last quarter	M-DRAT	Quarterly	3	8	50.0%	N/A	<5%
S.2.6: Supervision	RD	Percentage of HPs supervised by the District TB Coordinator during the previous quarter	M-DRAT	Quarterly	6	6	100.0%	N/A	85%
		Percentage of HPs reporting supervisory visits by the District TB Coordinator	Project Records	Quarterly	N/A	N/A	N/A	N/A	85%
S.2.7: Coordination	RD & UC	Percentage of meetings attended	Project Records	Quarterly	N/A	N/A	N/A	N/A	80%
		Number of joint supervisory visits to the HP	Project Records	Quarterly	N/A	N/A	N/A	N/A	6
IR3: Integrate TB/HIV activities to address high co-infection rates (10% effort)									
<i>*Baseline for S.3.3 and S.3.4 includes only SS+ TB cases, this will be amended in future MDRAT surveys and updated in the first annual report.</i>									
S.3.1: TB and HIV Education	UC	Number of OVC and youth volunteers trained	Project Records	Quarterly	N/A	N/A	N/A	N/A	60
		Number of Pastors' Networks trained	Project Records	Quarterly	N/A	N/A	N/A	N/A	3
S.3.2: Case Finding in PLWHA	UC	Number of HBCAs trained	Project Records	Quarterly	N/A	N/A	N/A	N/A	40
S.3.3: HIV/TB Testing	RD & UC	Percentage of HIV+ patients screened for TB	M-DRAT	Quarterly	1609	3454	46.6%	N/A	60%
		Maintain high levels of HIV testing among TB patients	M-DRAT	Quarterly	509	510	99.8%	N/A	>95%
S.3.4: CPT	RD & UC	Proportion of TB/HIV patients on CPT	M-DRAT	Quarterly	379	380	99.7%	N/A	90%
		Percentage of HCs reporting stock outs of Cotrimoxazole in the last quarter	M-DRAT	Quarterly	N/A	N/A	N/A	N/A	<25%
S.3.5: CB-DOT	UC	Number of HBCAs trained on CB-DOT	Project Records	Quarterly	N/A	N/A	N/A	N/A	40

Rural Districts (RD); Urban Centers (UC)

## Indicator Definitions

Strategy	Location	Indicator	Numerator	Denominator
IR1: Empower people with TB to seek and complete treatment, with the support of their communities (45% effort)				
S.1.1: ACSM	RD	Percentage of respondents surveyed know that TB is transmitted through the air by coughing	Number of respondents that stated that TB is transmitted through the air by coughing	Total number of survey respondents*
		Percentage of respondents surveyed know that cough longer than three weeks is a sign of TB	Number of respondents that stated that cough longer than three weeks is a symptom of TB	Total number of survey respondents*
		Percentage of respondents surveyed know that TB is curable	Number of respondents that stated that they believed TB is curable	Total number of survey respondents*
		Percentage of respondents surveyed know that TB treatment is free	Number of respondents that stated that TB treatment is free	Total number of survey respondents*
		Percentage of volunteers trained	Number of volunteers who received training on TB	Total number of volunteers
		Percentage of VHCs trained	Number of VHCs trained on TB	Total number of functioning VHCs
S.1.2: Case Detection	RD	Case Notification Rate	Number of new SS+ pulmonary TB cases reported x 100,000	Total population in a specified area
		Percentage of TB suspects examined by sputum microscopy	Number of TB suspects examined by sputum microscopy	Total number of TB suspects
		Percentage of referrals received from volunteers	Number of TB suspects referred by the community as reported by the HC	Total number of TB suspects received at the HC
		Percentage of referrals made by volunteers	Number of TB suspects referred by the community as reported by the community	Total number of TB suspects received at the HC
S.1.3: Treatment Compliance	RD	Cohort analysis for treatment outcomes of SS+ patients		
		Treatment success	Number of new SS+ pulmonary TB cases registered in a specified period that were cured plus the number that completed treatment	Total number of SS+ pulmonary TB cases registered in the same period
		Cure rate	Number of SS+ patients who were SS- at the final (5th month) sputum test	Total number of SS+ pulmonary TB cases registered in the same period
		Treatment completed	Number of patients who did not return for the final sputum test, but did complete the entire course of medication	Total number of SS+ pulmonary TB cases registered in the same period
		Treatment failure	Number of patients whose final sputum test was SS+ even though they completed the full course of treatment	Total number of SS+ pulmonary TB cases registered in the same period
		Interruption rate	Number of patients who stopped the treatment for two months or more	Total number of SS+ pulmonary TB cases registered in the same period
		Mortality rate	Number of patients who died while on TB treatment	Total number of SS+ pulmonary TB cases registered in the same period
		Transfer rate	Number of patients who transferred to another health facility during the course of treatment	Total number of SS+ pulmonary TB cases registered in the same period
		Percentage of SS- TB patients completing treatment	Number of SS- TB patients that successfully completed the full course of medication	Number of SS- TB patients registered in the same period
Percentage of patients on CB-DOT	Number of patients on CB-DOT	Total number of TB patients (SS+ and SS-)		

		Sputum smear conversion	Number of SS+ patients who converted to SS- after the intensive phase of treatment	Total number of SS+ patients pre-treatment
S.1.4: C-HIS	RD	Percentage of VHCs with local data on TB in the previous quarter	Number of VHCs with data on TB in the previous quarter	Total number of functioning VHCs
		Percentage of HCs that compile C-HIS data collected by volunteers on TB	Number of HCs that compile C-HIS data collected by the volunteers on TB	Total number of HCs
<b>IR2: Strengthen National Tuberculosis Program (NTP) Systems to improve TB service delivery and patient outcomes (45% effort)</b>				
S.2.1: Assessment	RD & UC	Percentage of health center assessments conducted quarterly	Total number of HC assessments conducted each quarter	Total number of HCs
		100% of health center assessments will be conducted with participation from the District TB Coordinators or designated representative	Total number of HC assessments conducted with participation from the District TB Coordinator or designated representative	Total number of HCs
S.2.2: Diagnostic Quality	RD & UC	Proportion of major errors	Number of errors, reporting (+) as (-) or visa versa	Total number of sputum smears reviewed
		Proportion of TB suspects with SS+ confirmation (WHO)	Number of TB suspects that are SS+	Total number of TB suspects
S.2.3: Access	RD	Percentage of health facilities reporting sputum bottle stock outs in the previous quarter	Number of HFs reporting stock outs of sputum bottles in the previous quarter	Total number of HFs
S.2.4: Referral	RD	Percentage of referred patients from the community recorded at the health center level	Number of patients referred from the community who are recorded at the HC	Total number of patients referred from the community
		Percentage of TB+ patients that returned to the community	Number of TB+ patients that returned to the community after diagnosis	Total number of SS+ TB patients diagnosed
S.2.5: Info Systems	RD & UC	Percentage of HC reporting drug stock outs in the last quarter	Number of HC reporting drug stock out of essential TB medications in the last quarter	Total number of HCs
S.2.6: Supervision	RD	Percentage of HPs supervised by the District TB Coordinator during the previous quarter	Number of HPs who received a supervisory visit by the District TB Coordinator during the previous quarter as reported by the District TB Coordinator	Total number of HPs
		Percentage of HPs reporting supervisory visits by the District TB Coordinator	Number of HPs who report having received a supervisory visit by the District TB Coordinator during the previous quarter	Total number of HPs
S.2.7: Coordination	RD & UC	Percentage of meetings attended	Number of meetings with NTP, MOH and other partners attended	Total number of meetings invited to by the NTP, MOH and other partners
		Number of joint supervisory visits to the HP	Number of supervisory visits to the HP that were conducted with the District TB Coordinator and project staff	N/A
<b>IR3: Integrate TB/HIV activities to address high co-infection rates (10% effort)</b>				
S.3.1: TB and HIV Education	UC	Number of OVC and youth volunteers trained	Total number of OVC and youth volunteers trained	N/A
		Number of Pastors' Networks trained	Total number of Pastors' Networks trained	N/A
S.3.2: Case Finding in PLWHA	UC	Number of HBCAs trained	Total number of HBCAs trained	N/A

S.3.3: HIV/TB Testing	RD & UC	Percentage of HIV+ patients screened for TB	Number of HIV+ patients screened for TB	Total number of HIV+ patients examined
		Maintain high levels of HIV testing among TB patients	Number of TB patients with known HIV status	Total number of TB patients (SS+ and SS-)
S.3.4: CPT	RD & UC	Proportion of TB/HIV patients on CPT	Number of TB/HIV patients who have received at least one dose of CPT during treatment for TB	Total number of TB/HIV patients (SS+ and SS-)
		Percentage of HCs reporting stock outs of Cotrimoxazole in the last quarter <i>*This was not measured at baseline</i>	Number of HC reporting stock outs of Cotrimoxazole in the previous quarter	Total number of HCs
S.3.5: CB-DOT	UC	Number of HBCAs trained on CB-DOT	Total number of HBCAs trained on CB-DOT	N/A

\*Note: respondents who stated they had ever heard of TB were not asked follow-up TB questions, but were included in the denominator.

## Budget Narrative and Procurement Plan

### HEADQUARTERS BUDGET

#### A. Personnel / B. Fringe Benefits

Charges to the project are based on percent time actually worked in support of said project, as documented by World Relief's Time and Attendance Ceridian-tracked system. As a rule, salary and benefits increase annually by up to four percent. However, since time dedicated by technical support and backstopping fluctuates according to the annual needs of the project, the total dollar figure may not increase overall by four percent. Salary and Fringe benefits as calculated are based on one Director of Health and Social Development staff at 5-10%, one Maternal and Child Health (MCH) Director at 10-20%, and one HQ MCH Specialist 20-30%, depending on the year and project needs.

*Below is the breakdown of the 25% fringe benefits of the Headquarters budget*

Employer FICA Expenses	7.65%
State Unemployment taxes	1.20%
Discretionary contribution and Disability insurance	3.60%
401 K Match	3.00%
Relocation Allowance-CER	0.44%
Medical, Dental and Life	8.59%
Workers Compensations	0.30%
Ceridian Administration fee	0.22%
<b>Total</b>	<b>25.00%</b>

#### C. Travel

Domestic travel (including transport, lodging, and meals) is for annual meetings and/or conferences or workshops including, but not limited to, the Global Health Council, American Public Health Association (APHA), and the CORE group. Airfares are based on coach class, discounted tickets. Travel between Baltimore office and Washington, DC, New York, Philadelphia and other common conference sites in vicinity is based on current Amtrak round trip prices. Philadelphia and Atlanta were selected as illustrative locations of the annual meetings for the CORE Group and American Public Health Association. The technical backstop will attend at least one conference/workshop per year through the duration of the project to stay up to date and share lessons learned with the broader public health community. The CORE Group has a working group specifically about TB in which those CSHGP TB category grantees are encouraged to participate. Modest prices are expected for hotels and meals. All travel costs over \$10 must be verified by a receipt.

All international travel is paid using PVO match funds and based on lowest possible price quotes on coach class tickets, with anticipation of price fluctuations. WR uses Menno Travel Service, Inc (Minneapolis, MN) to obtain discounted fares (ex. \$1,800 for Baltimore-Maputo round trip). Budget includes 2 trips in the first year for DIP development and for monitoring/documenting the annual report, two trips in year three for project support and the Midterm Evaluation, one trip in both year two and year four for project support, and one trip in year five for the Final Evaluation. One other trip is included in the budget to allow for training and specialized technical support to meet needs that arise during the project lifetime. Budget for each trip includes cost of airline ticket, visas, meals and accommodations (see ANNEX 1 for projected trips and estimated cost per trip).

#### D. Equipment

The \$6,000 budgeted in equipment using PVO match funds is for two replacement laptop computers for HQ technical backstop team during year one and year three based on cost of Dell laptop with basic software, and one replacement battery.

#### E. Supplies

Money budgeted for supplies includes communications related expenses (e.g. express mailings, long distance charges, etc.) and computer-related needs (e.g. TB related software, printer ink, report binding materials, slide/ transparency printing, health library materials and general office supplies).

#### F. Contractual Expenses

Funds budgeted for contractual services are for the services of a TB Expert Mentor who will build WR's technical and field based implementation capacity for TB prevention and control projects. During in year one, 14 days are budgeted for DIP development, review and revision; nine days in year two for reviewing project progress, providing technical support and implementation advice; 14 days in year three for technical support and input related to the Midterm Evaluation process; and four days in year four and year five for providing technical support and input to the Final Evaluation process.

#### G. Other

Other expenses include \$350-600 is budgeted for each year of the project to fund headquarters training opportunities/workshop registration fees, documentation, printing, and other miscellaneous costs.

### *FIELD BUDGET*

#### A. Personnel / B. Fringe Benefits

All salary calculations include a three percent yearly increase to reflect cost of living increases. Director of Program Integration/Technical Advisor is an Other Country National (OCN). While it is strongly preferred that a Mozambican national fill the Project Manager position, initial searches suggest that the position may need to be filled by an OCN. Adjustment of the budgeted Project Manager's salary was made in response to recent in-country review of salary history for applicants to similar positions. To increase the likelihood of being able to recruit a qualified manager, more was allocated to that line item with funds freed up by changes in Mozambique labor law related to indemnity. All other TB field staff members are Mozambican nationals.

<b>Expatriate/OCN benefits (25% of salary)</b>	
Medical	3%
Housing	10%
Transportation	3%
Repatriation relocation	3%
Severance pay	3%
Communication	3%
<b>Total</b>	<b>25%</b>

All TB Project staff are paid in accordance with WR Mozambique salary structures and reflect cost of living in the region. Changes to indemnity was made based on the new law Government indemnity requirements decreased from six weeks to two weeks of salary per year worked upon termination of employment. Fringe

benefits for OCNs are calculated at 25% in accordance with the cost of WR Corporation's health and retirement plans. Individual variation may occur due to differences in the number of dependents and personal decisions related to health plan options, among other factors. Below is the breakdown of the 25% fringe benefits for the field budget based on last year's expenses.

The budget includes \$50/month health coverage for all national staff. National taxes (included in salary figures) are budgeted at 14%. Because the project will have twelve full-time TB project supervisors in the first year (FY2010) who will decrease to eleven by FY2012, the cost of Health Insurance for national staff will decrease over the life of the project. The two staff categories (Mozambican Staff and OCNs) are under two separate insurance schemes. The Mozambican staff have a self-insured scheme that is \$50/month, of which Other Country Nationals (OCNs) do not participate. This explains why they have different percentages of their salary allocated to fringe benefits.

### C. Travel

The same principles of budget-minded travel apply as described in the HQ section of the narrative. Anticipated international travel expenses include TB Project Manager and/or Director of Program Integration/Technical Advisor visit to US for DIP review in year one and to attend/present at a US-based conference (e.g. GHC, APHA) in years one, three and five. Round trip travel from Maputo to Baltimore/Washington includes accommodation expenses. International travel is paid using PVO match funds.

In-country travel includes cost of travel between WR Mozambique country office in Maputo, the TB Project office in Chokwe and the six districts and four urban sites within Gaza province. Travel costs are based on current project travel costs, adjusted to reflect the greater distances covered in the TB project area and include travel-related expenses (food, lodging, reasonable expenses incurred by TB Project Staff during community visits, staff per-diems for extended time spent away from their home and re-location stipends for staff who would need to re-locate to remote areas for the life of the project). (See ANNEX 1 for project districts and other destinations that project staff will need to travel).

### D. Equipment

All equipment will be paid for using PVO match funds. Budgeted equipment costs are based on inquiries made by the Director of Program Integration with the goal of obtaining the least costly but highest quality available. For all equipment purchases, the TB Project team will obtain at least three quotes to compare local prices/quality. If there is less than three local vendors available, WR will obtain quotes from all available vendors.

Three motorbikes will be purchased for the MOH in three districts to enable supervision of TB activities in remote health centers. Lab equipment includes slides and sputum bottles as well as at least two microscopes and solar panels for improved TB diagnosis.

### E. Supplies

A small incentive such as a headscarf will be given to volunteers every other year. Incentives will be purchased in country, and cost approximately \$3.50-\$4.00 per volunteer. Program supplies and materials include supplies for community education, such as flip charts, files, library materials, and other supplies specific to interventions. General office supplies are listed separately under G. Other, Office Expenses.

#### F. Contractual Expenses

Contractual expenses include the consultants' travel for the Midterm and Final Evaluations. The evaluator will be selected by USAID and consultancy fees will be paid for by USAID from a separate budget outside the grant. KPC survey expenses include printing, food and lodging for participants, and survey related transportation costs. Budgeted amounts are based on current project costs.

#### G. Other

**TRAINING:** Supervisor/Animator/Volunteer training costs are for entire TB project staff, including volunteers, to facilitate group cohesion and orientation to TB project goals and methods. The budgeted amount is based on expenses from current projects. Trainings will consist of an initial training with 12 Supervisors as well as 66 Animators (in a voluntary capacity) for five days as well as a yearly refresher training. The first year's training will be paid for using USAID funds and the subsequent years trainings will be paid for using PVO match funds.

Lab staff training will be paid for using PVO match funds. This will include the transport of 12 district lab personnel and training facilitators every other year as well as accommodation and food for three days at a time. Other training will be paid for using PVO match funds. This will include the transport and training of 12 MOH district supervisors and training for the HIV/HBC animators and volunteers and refresher training every other year. Training materials include A4 and A3 size plastic pockets, stationery and flip files for project supervisors, animators, and volunteers. These training materials will be paid for using PVO match funds.

**OFFICE EXPENSES:** These costs are reflective of current project costs for office/warehouse rent, communications costs, upkeep and general office supplies. Photocopying/printing expenses are based on current project costs, but adjusted to reflect TB project area.

**MAINTENANCE:** Equipment repair/maintenance, fuel and vehicle-related costs are based on current costs applied to TB project area with acknowledgement that maintenance costs increase with age of equipment.

## ANNEX TO COST APPLICATION

### HEADQUARTERS BUDGET

*Domestic travel:* Expected domestic travels include commuter trips between Baltimore and Washington DC for CORE Group annual meetings and Child Survival conferences/workshops and travel and hotel accommodation for APHA and Global Health Council.

*International travel:* During the course of the project the technical backstop will make two trips from Baltimore to Mozambique in year one and three, one trip in year two, four and five. The length of travel will range between 13 days to 30 days and the estimated cost of each trip is between \$2,350 to \$4,850, depending on the duration of the trip. World Relief Headquarters travel policy states that "Foreign and domestic travel shall be booked at the most reasonable available rate, such as economy class." Reimbursements for all business trips are based on actual expenses supported by receipts when available and there are no per diems.

#### HQ Domestic travel estimates

F/Year	No. of trips	Destination	Length	Trains/plane	Lodging and/or meals	Est. cost
FY2010	7	Baltimore to DC	7 days	\$20(each r/trip)	\$70 (\$10/day *7 days)	\$ 210.00
FY2011	1	Baltimore to Atlanta	4 days	\$280 round trip	\$400(\$100/day *4 days)	\$ 680.00
FY2012	1	Baltimore to Philadelphia	4 days	\$260 round trip	\$400 (\$100/day *4 days)	\$ 660.00
FY2013	5	Baltimore to DC	5 days	\$20(each r/trip)	\$50 (\$10/day *5 days)	\$ 150.00
FY2014	1	Baltimore to Atlanta	5 days	\$300 round trip	\$500 (\$100/day *5 days)	\$ 800.00
<b>Total</b>						<b>\$ 2,500.00</b>

#### HQ International travel estimates

Financial Year	No. of trips	Destination	Length	Air & ground transport	Lodging & meals	Est. cost
FY2010	2	Baltimore to Maputo	14 days each	\$2100(each trip)	\$700 (\$50/day *14 days)	\$ 5,600.00
FY2011	1	Baltimore to Maputo	14 days	\$2110 round trip	\$700 (\$50/day *14 days)	\$ 2,810.00
FY2012	2	Baltimore to Maputo	14 days each	\$2200(each trip)	\$700 (\$50/day *14 days)	\$ 5,800.00
FY2013	1	Baltimore to Maputo	13 days	\$2200 round trip	\$845 (\$65/day *13 days)	\$ 3,045.00
FY2014	1	Baltimore to Maputo	29 days	\$2580 round trip	\$2175(\$75/day *29 days)	\$ 4,755.00
<b>Total</b>						<b>\$ 22,010.00</b>

**FIELD BUDGET**

*Domestic travel:* The project office will be based in Chokwe and project staff will make trips to the project districts. The most distant is 600 km from the project office costing approximately \$30 per round trip. The 12 supervisors will also make trips to the field every month using public transport at an average of \$25 per person per month. Project staff will also make trips to Xai Xai or Maputo. World Relief Mozambique per diem rates (as with the previous projects) is \$70 a month per person for any project work done in the project area that requires them to stay away from home for three weeks at a time. For staff travelling outside the project area, the per diem rate is broken down as follows: Accommodation=\$9.52., Supper=\$4.19, Lunch=\$4.19., Breakfast=\$1.52. Examples of travel locations are listed below.

**Field office domestic travel**

From	To (round trips)	
Chokwe	<b>Six rural Care Group districts</b>	<b>Four urban centers</b>
	Chicualacuála	Macia town, Bilene
	Chigubo	Chokwe town, Chokwe
	Guija	Lionde, Chokwe
	Mabalane	Guija town, Guija
	<b>Massingir</b>	
	<b>Maputo (World Relief office)</b>	

*International travel:*

The Project Manager or the Director of Program Integration/Technical Advisor will make trips to the United States for the DIP review in year one and to attend/present at US-based conferences such as GHC and APHA in years three and five. Below is the estimated cost of the trips to the US.

**Field Office International travel estimates**

Financial Year	No. of trips	Destination	Length	Air & ground transport	Lodging & meals	Est. cost
FY2010	1	Maputo to Baltimore	4 days	\$1930(each trip)	\$280 (\$70/day *4 days)	\$2,210.00
FY2012	1	Maputo to Baltimore	3 days	\$1950(each trip)	\$210 (\$70/day *3 days)	\$2,160.00
FY2014	1	Maputo to Baltimore	4 days	\$1950(each trip)	\$280 (\$70/day *4 days)	\$2,230.00
<b>Total</b>						<b>\$6,600.00</b>

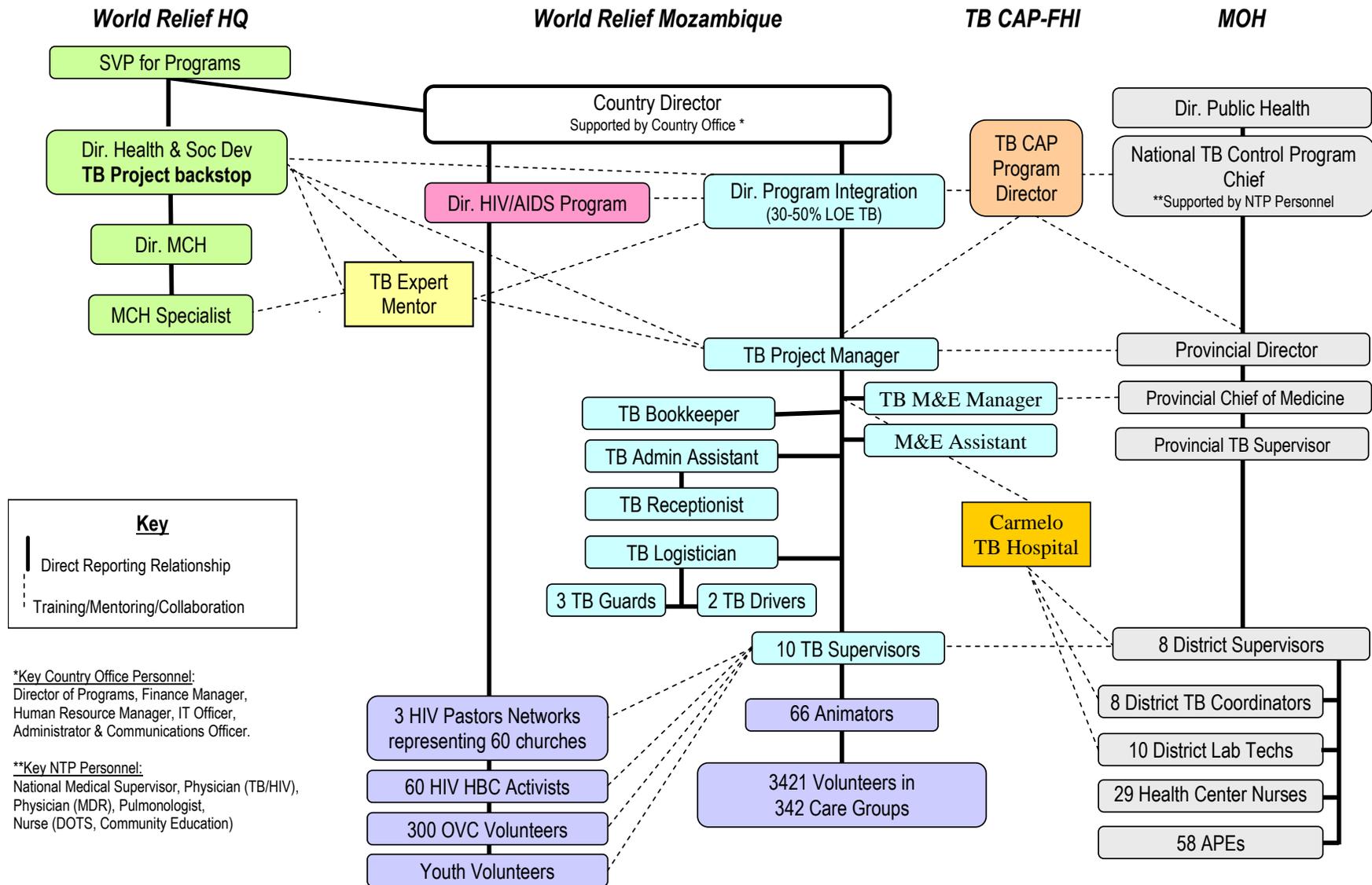
### Annex 4: Human Resource Table

	Position	Number of Workers	Organizational Affiliation	Main Responsibilities	TB-specific expertise	% LOE	Entity Remunerating
WR HQ	Technical Backstop	1	World Relief	Director of Health and Social Development; Build capacity in MCH and HIV/AIDS teams to integrate TB into respective programs.	Nurse MPH, Clinical TB experience in Africa and the USA	15%	WR
	MCH Director	1	World Relief	Oversee technical quality of MCH programs	Community mobilization and behavior change; Developing TB-specific program experience;	10%	WR, TB
	MCH Specialist	1	World Relief	Proved technical support for CSHGP Programs	Community mobilization and behavior change; Developing TB-specific program experience	50%	WR, TB
WR Mozambique Staff	Country Director	1	World Relief	Country Office leadership & overall support to project	None required	5%	WR, Moz
	Financial Manager	1	World Relief	Support for project financial management	None required	15%	WR, Moz
	HR Manager	1	World Relief	Support for project HR & Admin issues	None required	10%	WR, Moz
	Director of Program Integration/Technical Advisor	1	World Relief	Oversight for the program and tech expertise	Physician; clinical diagnosis and treatment of TB in Africa; TB-CAP sub-grant experience; 15+ years experience with community mobilization	50% Y1; 30% Y2-5	WR, TB
	TB Project Manager	1	World Relief	Oversee project implementation	Previous experience managing TB programs	100%	WR, TB
	TB M&E Manager	1	World Relief	Lead project M& E activities	Previous experience with TB programs	100%	WR, TB
	TB M&E Assistant	1	World Relief	Assist project M&E activities	Previous experience with TB programs	100%	WR, TB
	TB Supervisors	10	World Relief	Supervise/train the animators & CG volunteers, work with the MOH District supervisors	Prev. exp with training & supervision skills and facilities and community structures to be targeted by project; TB-specific expertise to be developed by project.	100%	WR, TB
	TB Receptionist	1	World Relief	Office administration services	FHI TB-CAP sub-grant	100%	WR, TB
	TB Admin Assistant	1	World Relief	Office administration services	FHI TB-CAP sub-grant	100%	WR, TB
TB Bookkeeper	1	World Relief	Tracks expenses and procurements	FHI TB-CAP sub-grant	100%	WR, TB	

	TB Logistician/ Mechanic	1	World Relief	Manage logistics in procurement & communication, vehicle repair	None required	50%	WR, TB
	TB Assistant Mechanic	1	World Relief	Mechanical repair of WR vehicles	None required	100%	WR, TB
	TB Guards	3	World Relief	Guard project office	None required	100%	WR, TB
	TB Drivers	2	World Relief	Drive vehicle	None required	100%	WR, TB
MOH/ PNCT	Provincial Director	1	MOH/ PNCT	Oversee health activities in Gaza	Health systems management for TB-DOTS	5%	MOH
	Provincial TB Coordinator	1	MOH/PNCT	Oversee all TB activities in Gaza	Clinical experience with TB, management of TB programs at Province level	100%	MOH
	District TB Supervisors	8	MOH/PNCT	Oversee district TB activities, including CB-DOTS, Data Management and APEs,	TB-DOTS implementation and supervision	100%	MOH
	Lab Technicians	16	MOH/PNCT	Prepare and perform sputum smear bacteriology	Exp in diagnosing TB	50%	MOH
	TB Nurse	33	MOH/PNCT	Provide clinical services	Diagnose and treat TB	50%	MOH
	Physician	8	MOH/PNCT	Provide clinical services	Diagnose and treat TB	20%	MOH
Community health workers	APE's	58	Community	Identify and refer cases to the health centers	To be developed	15%	Paid by clients
	Care Group Volunteers*	4218	Community	Provide education to 10 households, identify and refer TB cases, support the padrinho	To be developed	10%	Volunteer
	OVC Volunteers	300	Community	Promote project BCC in the community through social mobilization	To be developed	10%	Volunteer
	HIV HBC Activists	60	Community	Provide education to HBC clients, identify and refer TB cases, support padrinho	To be developed	10%	Volunteer
	Pastors	120	Community	Lead congregations	To be developed	10%	Churches
	VHCs	117	Community	Sensitized and trained on importance of referrals	To be developed	10%	Volunteer
External Mentoring in TB Program Management	Director TB CAP, Moz	1	TB CAP	Oversee TB CAP activities in Mozambique	Physician, TB Program implementation	5%	FHI/TB-CAP
	Henry Perry, Adjunct Professor, TB Expert Mentor	1	JHU	Build TB Capacity of WR HQ and senior field staff	Physician, TB program implementation	5%	WR for time spent on TA
Private sector providers	Traditional Healers	400	Community	Sensitized and trained on importance of referrals	To be developed	10%	Paid by clients

*\*This is an estimated number based on government population statistics. A census will be performed to determine the exact number of household and CGVs needed.*

## Annex 5: Organigram



## Annex 6: Job Descriptions of Key Personnel

### HQ Backstop

Title: Director Health and Social Development	Department/Ministry: International Health Programs
Reports to (Title): Senior Vice President of Programs (Stephan J. Bauman)	

#### I. OVERVIEW/ GENERAL DESCRIPTION

To envision and lead the health and social development department in vision-casting, strategy setting, and programmatic implementation of the health and social development programs of World Relief and its partner agencies throughout the world and to assure their continued excellence through technical support and management. Priorities in strategic development of this sector of World Relief ministry include an increasing emphasis upon constituency collaboration with grassroots communities, local and international church partnerships, included integrated, practical approaches to biblical holism. Presently World Relief gives leadership to USAID funded programs in various countries in Sub-Saharan Africa, Asia, and Haiti. The Director of Health and Social Development will also provide advice and counsel in the development of integrated and/or Disaster Response programming that have health components.

#### II. ESSENTIAL FUNCTIONS

- To improve the health and fullness of life of families along key health issues, including but not limited to Maternal Child Health, HIV/AIDS, Child Development, and Anti-trafficking, by assuring the integrity, highest level of technical and managerial excellence, and the compassionate response of committed colleagues and staff.
- To innovate, pilot, and implement existing Health and Social Development strategy and programs towards World Relief's mission.
- To regular represent World Relief in speaking, writing, and fundraising capacities.
- To diversify the mission-related program and funding strategies in the broad area of health and social development to include major donors, foundations, and churches.
- To prepare proposals for funding and project work plans (detailed implementation plans) for health and social development programming.
- To develop, monitor and manage annual program plans, headquarters and field budgets, income and expenditures.
- To cultivate and maintain relationships to present and potential donors and technical support agencies.
- To work closely with the other program, donor development, and support services of World Relief to promote the work of the Health and Social Development programs and overall World Relief ministries.
- To guide, manage and nurture the professional growth of the staff of the Health and Social Development department and to recruit and hire other professional staff as programs develop.
- To assure the adequate training of field staff in basic interventions and program management/implementation issues such as: curriculum development, quantitative and qualitative

monitoring and evaluation designs, and education/ participatory methodology.

- To assure that HQ and field staff have access to current information related to Health/Social Development grant responsibilities (including USAID) and to maintain her own level of expertise by participating in professional groups and attending workshops and conferences.
- To monitor and evaluate progress on program objectives and maintain regular contact with field staff by phone, fax, e-mail and personal visits, and to address current issues by ensuring department staff visit each field office at least once per year and report to the SVP of Programs and World Relief regional and country directors informed of progress.
- To represent World Relief to professional bodies (including the Global Health Council, APHA, CCIH and the CORE support group to Health/Social Development programs and to integrate research designs into on-going programs and share our findings in peer reviewed journals, professional conferences, and manuals and publications.

### **III. MARGINAL (NON-ESSENTIAL) FUNCTIONS**

When possible, ideally participate in World Relief corporate strategy setting beyond the Health and Social Development sectors.

### **IV. KNOWLEDGE/SKILLS/EXPERIENCE REQUIRED (Minimum Level Necessary)**

*Education:* Health professional with advanced degree.

*Experience:* Minimum of 10 years experience working in public health and community development in a developing country.

Cross-cultural sensitivity/ experience required.

Experience with USAID centrally funded projects strongly preferred.

African or Asian field experience with church-related programs preferred.

*Skills* Strong technical writing skills required (submit samples of proposals and articles.)

Strong interpersonal communication skills to be able to relate well to a wide variety of field staff, and facilitate transfer of latest research in health into practical programs in the field.

Strong speaking and writing skills

Encouraging, warm, open and friendly personality.

### **V. MENTAL DEMANDS**

A clear, integrative thinker and communicator with excellent organizational skills.

Able to assure attention to detail in proposals, reports and evaluations.

Able to sustain concentrated effort on long-term project proposals and plans.

Able to sustain cyclical periods of intense work activity and maintain a regular travel schedule (20-30% time travel average.)

### **VI. PHYSICAL DEMANDS**

Able to travel as needed

No physical conditions that would make international travel in difficult circumstances impossible.

### **VII. SUPERVISION GIVEN**

To staff of the Health and Social Development team as well as support to managerial level field staff.

**VIII. SUPERVISION RECEIVED**

From the Senior Vice President of Programs

**IX. EQUIPMENT USED**

MS Word, Excel, PowerPoint, EPI INFO.

Internet fluency required.

**X. DISCLAIMER**

This description does not necessarily include every responsibility, requirement, skill, or working condition associated with the job. While this description is intended to accurately reflect the current job, management will review the job, as needed, and may require that different tasks be performed, depending on circumstances in the workplace.

**POSITION: TB Project Manager**

**LOCATION: Chokwe Office, Gaza Province, Mozambique**

**Scope of Work:** The TB Program Manager is responsible for all aspects of World Relief's TB Program in Mozambique, including the management of project staff, planning and implementation of the program strategy. The Program Manager reports to the Director of Integrated Programs for issues of line management but is also responsible to the Technical Unit in Baltimore for technical quality.

**Qualifications:** MD, or BSN with MPH and/or high level of experience in TB programming in Mozambique. Must be familiar with international guidelines and strategies to stop TB. Experience in community health program management highly desired. Language proficiency in English, Portuguese and Shangaan desired. Qualified individual should have strong affinity for village level fieldwork and leadership skills necessary for collaboration with MOH and other organizations at district, provincial and national levels.

**Responsibilities:**

1. To carry out quarterly and annual planning for the TB program in Mozambique in accordance with the project outlined in the proposal and Cooperative Agreement with USAID.
2. To assist in the selection, supervision and development of all project staff and to direct project operations.
3. To coordinate with MOH, NTP and TB CAP representatives and staff to achieve project and MOH objectives in TB prevention and control.
4. To supervise the monitoring and evaluation objectives and use said system to monitor project progress towards objectives.
5. To monitor project expenses according to the budget in conjunction with the accounting staff and the Country Office Finance Manager, and to assist in writing annual budget projections for the project.
6. To be responsible for all reports according to USAID guidelines (Detailed Implementation Plan, Annual Reports, and Quarterly Activity Reports) as well as all monthly in-house reports.
7. To oversee the design and writing of the TB community education curriculum and training, ensuring that NTP and international strategies and guidelines are reflected in the curriculum.
8. Supervise and facilitate capacity building at the local and district level of the MOH/NTP through laboratory technicians, district supervisors and data management staff.
9. To coordinate monitoring surveys, Midterm and Final Evaluations, and to adjust project management according to the results of the surveys and evaluations.

**POSITION: Monitoring and Evaluation Manager**  
**LOCATION: Chokwe Office, Gaza Province, Mozambique**

**Scope of Work:** To provide leadership and technical direction for project monitoring and evaluation; facilitate progress tracking and action; action and operations research; and periodic monitoring TB-KAP and DRAT survey assessments.

**Qualifications:** Masters in social science /statistics or public health with at least 5 years experience in health monitoring and evaluation. Experience needed with cohort analysis for evaluating TB treatment success. Skilled in qualitative and quantitative research methods. Familiar with operations research. Demonstrated documentation skills.

**Responsibilities:**

1. To implement the TB program health information system
  - Assess existing systems in Mozambique to facilitate linkages to project data
  - Utilize internationally recognized indicators and tolls for reporting, monitoring and evaluating TB programs
  - Follow implementation of the program through training and coaching
  - Prepare quarterly summary reports of program results for dissemination at National and District levels
  - Present key statistics to external review committee
  - Coordinate with other partners, particularly TB CAP and the PNCT, to insure that the TB program data system serves partner needs, can be scaled-up, and does not duplicate existing efforts
2. Coordinate periodic project wide monitoring surveys
  - Work with internal and external partners, and with HQ backstop, to finalize assessment format
  - Provide technical assistance to staff to plan, conduct, and analyze results
  - Lead sharing of the results at national level
3. To coordinate baseline, mid-term, and final surveys for the program
  - Lead logistics, financial, and technical assistance arrangements for surveys
  - Lead questionnaire development, training, surveying, and analysis
  - Lead feedback on surveys at national level
  - Write reports
4. To coordinate evaluations for the program
  - Work with the project director and HQ backstops to select external evaluators for mid-term and evaluation
  - Lead logistics, financial, and partner arrangements for evaluations
  - Work with project director to give feedback of evaluations at national level

## Annex 7: Training Plan

	Training Topics	Trainees	Timing	Responsible
1	<ul style="list-style-type: none"> <li>a) Training strategy for CB DOTS</li> <li>b) Tuberculosis (causes, symptoms/signs, prevention, treatment, etc.)</li> <li>c) Detection, referral and counter-referral between facility and community</li> <li>d) Diagnosis</li> <li>e) Direct observed treatment</li> <li>f) All forms used in TB control</li> <li>g) MDR</li> <li>h) Goals and indicators</li> <li>i) C-HIS and HIS</li> </ul>	<ul style="list-style-type: none"> <li>1) Ten WR Supervisors</li> <li>2) WR Project Manager</li> <li>3) WR M&amp;E Manager</li> <li>4) WR M&amp;E Assistant</li> </ul>	April-May 2010	<ul style="list-style-type: none"> <li>1) Dr. Ernst, Director of Program Integration</li> <li>2) HQ Backstop</li> <li>3) Provincial MOH</li> </ul>
2	<ul style="list-style-type: none"> <li>a) Training strategy for CB DOTS</li> <li>b) Tuberculosis (causes, symptoms/signs, prevention, treatment, etc.)</li> <li>c) Detection, referral and counter-referral between facility and community</li> <li>d) Diagnosis</li> <li>e) Direct observed treatment</li> <li>f) All forms used in TB control</li> <li>g) MDR</li> <li>h) Goals and indicators</li> <li>i) detection and management of TB-HIV co-infection</li> <li>j) Case Management</li> <li>k) Quality Assurance</li> <li>l) C-HIS and HIS</li> <li>m) Flow of information between district and provincial structures to improve drug supply and data management</li> </ul>	<ul style="list-style-type: none"> <li>1) Eight District TB Supervisors</li> <li>2) Health workers from all H/F in the 8 project districts.</li> </ul>	April-May 2010	<ul style="list-style-type: none"> <li>1) Provincial MOH</li> <li>2) WR M&amp;E Manager</li> <li>3) Program Manager</li> </ul>
3	<ul style="list-style-type: none"> <li>a) Adult education principles; use of drama, song and dialogue, etc for communication</li> <li>b) Tuberculosis (causes, symptoms/signs, prevention, treatment, etc.)</li> <li>c) TB Co-infection with HIV</li> <li>d) Detection, referral and counter-referral between facility and community</li> <li>e) Diagnosis</li> <li>f) Direct observed treatment and criteria to choose a “padrinho”</li> <li>g) C-HIS and HIS</li> </ul>	<ul style="list-style-type: none"> <li>1) All 3,421 volunteers in their 342 Care Groups in 6 districts*.</li> <li>2) APEs and other health providers encouraged to sit in on the lessons in their village.</li> <li>3) Religious leaders</li> <li>4) Village Health Committees</li> </ul>	Start in June 2010 and continue during the first four years of the project	<ul style="list-style-type: none"> <li>1) WR Project Supervisors</li> </ul>

4	<ul style="list-style-type: none"> <li>a) Training strategy for CB DOTS</li> <li>b) Tuberculosis (causes, symptoms/signs, prevention, treatment, etc.)</li> <li>c) Detection, referral and counter-referral between facility and community</li> <li>d) Diagnosis and quality control</li> <li>e) Direct observed treatment</li> <li>f) All forms used in TB control</li> <li>g) MDR</li> <li>h) Goals and indicators</li> <li>i) Challenges related to TB and diagnosis</li> <li>j) C-HIS and HIS in general</li> <li>k) Sputum smear microscopy</li> <li>k) Fixing slides for storage and transport</li> </ul>	1) One lab technical person from each of the eight project districts	August-September 2010	<ul style="list-style-type: none"> <li>1) Provincial Lab Technician.</li> <li>2) Provincial TB Coordinator</li> <li>3) WR M&amp;E Manager</li> </ul>
5	<ul style="list-style-type: none"> <li>a) Training strategy for CB DOTS in the HI/AIDS program</li> <li>b) Tuberculosis (causes, symptoms/signs, prevention, treatment, etc.)</li> <li>c) Detection, referral and counter-referral between facility and community</li> <li>d) Diagnosis</li> <li>e) Relationship to HIV/AIDS</li> <li>f) Direct observed treatment</li> <li>g) MDR-TB</li> <li>h) Goals and indicators</li> <li>i) C-HIS and HIS</li> </ul>	<ul style="list-style-type: none"> <li>1) WR OVC and Youth Mobilization volunteers</li> <li>2) WR HBCAs</li> <li>3) Pastors' Networks</li> </ul>	May 2010	<ul style="list-style-type: none"> <li>1) WR Project Manager</li> <li>2) WR M&amp;E Manager</li> <li>3) WR Project Supervisors</li> </ul>

\*The number of CGVs may be adjusted after a full community census is completed

**World Relief Mozambique  
Vurhonga Community Based DOTS Project**

**Baseline Knowledge, Practice and  
Coverage (KPC) Survey Report**



**August 12, 2010**

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## Acronyms

ACSM	Advocacy Communication and Social Mobilization
CB-DOT	Community Based, Directly Observed Therapy
CB-DOTS	Community Based- Directly Observed Therapy Short-Course
CGV	Care Group Volunteer
C-HIS	Community Health Information System
CNR	Case Notification Rate
CSP	Child Survival Project
CSTS+	Child Survival Technical Support Plus
DOT	Directly Observed Therapy
DOTS	Directly Observed Therapy Short-Course, Internationally recommended strategy for TB control
DST	Drug Sensitivity Testing
HIV	Human Immunodeficiency Virus
KPC	Knowledge Practice and Coverage
SS	Sputum Smear
NTP	National Tuberculosis Program
TB	Tuberculosis
VHC	Village Health Committee
WHO	World Health Organization
WR	World Relief

## Table of Contents

I.	Executive Summary .....	1
II.	Background .....	1
	Location and population .....	1
	Overview of general health status of population .....	1
	The Tuberculosis (TB) Burden in Mozambique .....	1
	The TB burden in Gaza .....	2
	Structures for TB services .....	2
	Project Goal and Objectives .....	2
III.	Process and Partnership Building .....	3
IV.	Methods .....	4
	Project Indicators analyzed in this survey .....	4
	Sampling Design .....	4
	Interviewer Recruitment .....	5
	Interviewer and Supervisor Training .....	5
	Data Collection .....	5
	Data Analysis .....	5
V.	Results .....	6
	Project Indicators captured by the KPC .....	6
	Socio-Demographic Information .....	6
	Tuberculosis Symptoms .....	6
	Tuberculosis Knowledge .....	7
	Tuberculosis Treatment .....	7
	Tuberculosis Prevention .....	7
	Tuberculosis Stigma .....	7
	HIV Knowledge and Stigma .....	7
	TB/HIV Co-infection .....	8
VI.	Discussion .....	8
	External Comparisons .....	8
	Program Implications .....	8
	Information Dissemination .....	8

## Annexes

- Annex A: English Survey Questionnaire, A1
- Annex B: Shangaan Survey Questionnaire, A13
- Annex C: Raw Data Tables, A24
- Annex D: Sampling Framework, A45
- Annex E: Survey Team, A48
- Annex F: Training Schedule and Project Resources Required, A49

## 1. Executive Summary

In December 2009, the World Relief Vurhonga TB team conducted a Baseline KPC survey in the rural districts of the project area including Massingir, Chicualacuala, Massangena, Chigubo, Mabalane and Guija districts in Gaza Province, Mozambique. The survey was designed to assess the knowledge, attitudes and practices surrounding tuberculosis among adults. Communities were chosen at random, based on the thirty-cluster methodology and analyzed accordingly. This baseline survey tool will be repeated during the Midterm and Final assessments.

Indicators captured in this KPC Survey include:

- Knowledge that TB is transmitted through the air by coughing
- Knowledge that coughing longer than three weeks is a sign of TB
- Knowledge that TB is curable
- Knowledge that TB treatment is free

Additionally, the survey covers prevalence of TB symptoms, knowledge, treatment and prevention of TB along with issues of stigma, HIV and TB/HIV confection.

## 2. Background

### *Location and population*

Mozambique is a coastal country in southern Africa with an estimated population in 2007 of 20 million, and 1.2 million in the southern province of Gaza.<sup>18</sup> The project area includes the rural districts of Chicualacuala, Chigubo, Massangena, Massingir, Guija and Mabalane with a total population of 218,191 and 42,000 households<sup>19</sup>. In addition, the project will work with HIV+ individuals and their families in three urban sites: Macia in Bilene District, Chokwe Town and in Chokwe District and Guija town in Guija District with an additional population of 87,997<sup>20</sup>.

### *Overview of general health status of population*

The World Bank's Human Development indicators rank Mozambique 175 out of 179 countries with a life expectancy of 42.4 years.<sup>21</sup> In 2006, 35% of the population was urban, the median age was 18 years, the fertility rate was 5.2<sup>22</sup> and the infant mortality rate was 124/1,000.<sup>23</sup> Less than 40% of the population has access to clean drinking water, which increases rates of cholera and diarrhea.<sup>24</sup> Mozambique is mostly agrarian and vulnerable to disasters. Farming is the main source of income for 42.2% of urban households and 73% of rural households; and 96.6% of rural households headed by women.<sup>25</sup>

### *The Tuberculosis (TB) Burden in Mozambique*

The World Health Organization (WHO) ranks Mozambique 13<sup>th</sup> highest in prevalence of TB and 7<sup>th</sup> in TB mortality<sup>26</sup>. Among the 22 countries that comprise over 80% of all TB cases, Mozambique has the sixth lowest case detection rate<sup>27</sup>. Despite significant government resources to fight TB, the HIV crisis undermines much progress. The prevalence of all TB cases in Mozambique is 624/100,000. Among the infectious sputum smear positive (SS+) cases, the incidence was 186/100,000 in 2006<sup>28</sup> and the estimated prevalence rate in 2004 was 250/100,000.<sup>29</sup> While Directly Observed Treatment- Short Course (DOTS) is available in every province, the coverage rate varies greatly. Overall, DOTS coverages is 70.9%, however coverage in Gaza is only 54.1%, which is the third lowest in Mozambique.<sup>30</sup> Based on a 2005 cohort, the DOTS treatment success rate was 70% for all cases, and 79% for new cases.<sup>31</sup> Nationally, the DOTS case detection rate is 47%, with a treatment success rate of 70% for both new and returning SS+ cases.<sup>32</sup> A national survey in 1999 stated a (Multi-Drug Resistant Tuberculosis) MDR-TB rate of 3.4%.<sup>33</sup>

### *The TB burden in Gaza*

The Provincial Annual Report showed an increase in all types of TB cases from 2007 to 2008. Sputum Smear Positive (SS+) cases rose from 1,801 to 1,883, Sputum Smear Negative (SS-) cases went from 1,508 to 1,856 and cases of recurring TB rose from 235 to 276.<sup>34</sup> For a 2007 cohort, the province reported 70.8% of the notified cases were cured, 3.3% completed the course of treatment but did not return for a sputum test, so seroconversion could not be determined and the TB case fatality rate was over 20/100,000 SS+ cases.<sup>35</sup> Gaza self-reported an 11.5% abandonment rate and a 5.2% transfer rate. In 2008, Gaza reported that 65.3% of new SS+ cases were also tested for HIV, while of the new HIV cases; only 24.1% were screened for TB.<sup>36</sup> Based on WHO estimates for case detection and the 2007 census, in Gaza approximately 61% of the anticipated cases were found, thus 1,182 cases were not detected. In 2008 the total number of TB cases was 4,693; 2,990 (64%) of them were also HIV+<sup>37</sup>.

### *Structures for TB services*

TB facilities include: 149 health centers with DOTS capacity, and 800 health posts with the potential for expansion of community-based DOTS.<sup>38</sup> Mozambique has a total of 250 labs with smear microscopy and one National Laboratory in Maputo responsible for multi-drug resistance testing and drug sensitivity testing (DST). In 2008, 88% of the National Tuberculosis Program (NTP) was funded with the government's contribution totalling 11% of the budget. The cost of the NTP per capita was \$0.90.

### *Project Goal and Objectives*

The project goal is to reduce the burden of TB, in line with the Stop TB Strategy and Mozambique National Strategic Plan. Its primary objectives are to increase the case notification rate by 50% and achieve 85% treatment success rate for CB-DOTS in project areas.

### Intermediate Result 1: People with TB will be empowered to seek and complete treatment with the support of their communities. (45% Effort)

#### Strategy 1.1: Advocacy, Communication, and Social Mobilization (ACSM) (Rural Districts)

- Objectives:*
- Increase knowledge that TB is transmitted through the air by coughing from 20.7% to 60%
  - Increase knowledge that cough longer than three weeks is a sign of TB from 13.3% to 60%
  - Sustain the high percentage of respondents surveyed who know that TB is curable at 85%
  - Increase knowledge that TB treatment is available for free from 39.7% at baseline to 80%
  - Train 100% of Care Group Volunteers (CGVs) in CB-DOTS
  - Train 100% of functioning Village Health Committees (VHC) in TB

#### Strategy 1.2: Case Detection (Rural Districts)

- Objectives:*
- Increase the quarterly case notification rate (CNR) by 50% from 110 to 165
  - Maintain the high percentage of TB suspects examined by sputum microscopy at 80%
  - Increase the percentage of referrals made by volunteers (measured at the HC and at the community) from 20.6% to 60%

#### Strategy 1.3: Treatment Compliance (Rural Districts)

- Objectives:*
- Conduct cohort analysis of treatment outcomes for SS+ patients including:
    - Increase the rate of treatment success from 78.6% to 85%
    - Maintain the high level of sputum smear conversion at 90%
  - Eighty-five percent of SS- patients will complete their full course of treatment
  - Increase the percentage of patients on CB-DOT from 26.4% to 60%

#### Strategy 1.4: Community Health Information System (C-HIS) (Rural Districts)

- Objectives:*
- Eighty percent of VHCs will have local data on TB from the previous quarter

Eighty-three percent of HCs will compile C-HIS data collected by volunteers on TB

Intermediate Result 2: Strengthen NTP Systems to improve TB service delivery and patient outcomes. (45% Effort)

Strategy 2.1: Facility Assessments (Rural Districts and Urban Centers)

*Objectives:* Conduct quarterly assessments of all health centers in the project area  
One hundred percent of HC assessments will be conducted with participation from the District TB Supervisors or designated representative

Strategy 2.2: Diagnostic Quality (Rural Districts and Urban Centers)

*Objectives:* Bring the proportion of TB suspects with SS+ confirmation in line with international standards by lowering it from 44.6% to between 10% and 25%  
Maintain the low proportion of major errors at less than 1%

Strategy 2.3: Access (Rural Districts)

*Objectives:* Less than 10% of HFs will report sputum bottle stock-outs in the previous quarter

Strategy 2.4: Referral (Rural Districts)

*Objectives:* Seventy-five percent of the patients referred from HPs will be recorded at health center  
Eighty percent of TB+ patients will return to the HP after receiving their diagnosis

Strategy 2.5: Information Systems (Rural Districts and Urban Centers)

*Objectives:* Less than 5% of HCs reporting drug stock-outs of essential TB drugs for the last quarter  
Less than 2% of those who start treatment will drop out (Interruption rate)

Strategy 2.6: Supervision (Rural Districts)

*Objectives:* Eighty-five percent of HP will be supervised by the District TB Supervisor during the previous quarter as reported in the M-DRAT  
Eighty-five percent of HPs will report supervisory visits by the District TB Supervisor

Strategy 2.7: Coordination with NTP (Rural Districts and Urban Centers)

*Objectives:* Attend 80% of meetings to which WR is invited  
Conduct six joint supervisory visits to HPs each quarter

Intermediate Result 3: Decrease the burden of HIV in people with TB and decrease the burden of TB among PLWHA. (10% Effort)

Strategy 3.1: TB and HIV Education through ACSM (Urban Centers)

*Objectives:* Train 60 OVC and youth volunteers in TB including stigma reduction  
Train three PNs in TB including stigma reduction

Strategy 3.2: Intensified TB Case Finding among PLWHA (Urban Centers)

*Objectives:* Train 40 HBCAs in TB case finding, referral and stigma reduction

Strategy 3.3: Routine HIV/ TB Testing (Urban Centers and Rural Districts)

*Objectives:* Improve the percentage of HIV+ patients screened for TB from 46.6% to 60%  
Maintain high levels of HIV testing among TB patients at 95%

Strategy 3.4: Cotrimoxazole Prevention Therapy (CPT) (Urban Centers and Rural Districts)

*Objectives:* Maintain high levels of CPT in HIV/TB patients at 90%  
Less than 25% of HCs reporting stocks out of Cotrimoxazole in the previous quarter

Strategy 3.5: Case Management of Co-Infections (Urban Centers)

*Objectives:* Number of HBCAs trained on CB-DOT

### **3. Process and Partnership Building**

World Relief, through previous CSP programs has worked closely with the district health departments as well as provincial leaders. District health staff are aware of the upcoming project's activities and familiar

with the survey process. At the community level, the village leaders were informed of the survey team's presence and their permission was sought before interviews began. There were some constraints in making the KPC more participatory. The great distances of the villages from the capital and the lack of accommodation made it difficult to get MOH employees directly involved, as they were not able to spend several days away from work in the rural areas to participate in surveying activities.

#### 4. Methods

The purpose of this KPC survey is to provide a baseline against which the Vurhonga CB-DOTS project will measure the impact of community education activities at midterm and at the end of project (EOP). Baseline measurements for the key knowledge indicators, TB is curable and treatment is free, will be used to inform targets as well as reference changes in knowledge over time. In addition, this KPC survey seeks to gain information as to community beliefs and practices surrounding TB. The project will incorporate the results of this survey into the community teachings to further the project goal to reduce the burden of TB.

The baseline KPC questionnaire was adapted from previous surveys used in CSHGP TB projects and from the WHO recommendations for KPC surveys. Survey respondents included adults currently residing in Mozambique. In order to maintain a similar ratio for future surveys, migrant workers who work outside of the community were excluded. Melanie Morrow and Debbie Dortzbach from World Relief and by James Ricca from MCHIP reviewed the survey. The approved questionnaire was developed in English and then translated into Shangaan by Dr. Pieter Ernst and back translated for accuracy (see Annex A and B for the survey questionnaires.) The survey was then field tested in Chokwe, which is adjacent to the project area and is culturally, economically and geographically similar.

*The questionnaire contains 52 questions that cover the following topics:*

Questions 1-6	Socio-Demographics
Questions 7-13	Prevalence of TB symptoms
Questions 14-22	Knowledge of TB
Questions 23-34	Treatment of TB
Questions 35-36	Prevention of TB
Questions 37-43	TB Stigma
Questions 44-49	HIV Knowledge and Stigma
Questions 50-52	TB/ HIV Co-infection

*Project Indicators analyzed in this survey*

1. Knowledge that TB is curable: The number of those surveyed that responded that TB is curable divided by the total number of respondents in the survey.
2. Knowledge that TB treatment is free: The number of those surveyed that responded that TB treatment is free divided by the total number of respondents in the survey.
3. Knowledge of how TB is transmitted: The number of those surveyed that responded that TB is transmitted through the air by coughing divided by the total number of respondents in the survey.
4. Knowledge that long duration cough is a sign of TB: The number of those surveyed that responded that cough longer than three weeks is a sign of TB divided by the total number of respondents in the survey.

*Sampling Design*

The sample size was determined using the CSTS+ KPC Module – two-stage 30 by 10 cluster sampling method. This model uses the following formula to calculate the sample size:

$$N = \frac{Z^2(1-P)P}{E^2}$$

N= Sample size; Z=1.96 (for a confidence interval of 95%); P= Known prevalence; E=% within=±0.05.

Thirty clusters were randomly selected from a list of all the villages in the project area, taking into account the differences in population size of the villages (Proportional Population Cluster Sampling method). See Annex D for the sampling framework. For each cluster, interviews were conducted with 10 households. Upon arriving in a village, the village headman was asked to identify a place considered close to the central point of the village. At the central site, a member of the survey team spun a pen. The survey team started in the direction of the pen (pointed end) to the first house. If the object pointed in the direction where there were no houses, the procedure would be repeated until there were houses in that direction.

The interview started at the nearest household and continued to the next one in the same direction until the required number of households per cluster was met. In cases where the chosen direction had less than the required sample the object would be re-spun to change direction at the farthest household and the team proceeded in that direction until the total required sample in that cluster was met.

#### *Interviewer Recruitment*

Interviewers for the Final KPC survey included project staff and nine external interviewers. The external interviewers were recruited with assistance from the project staff. Project leadership conducted interviews and final candidates were chosen based on their reading and writing skills. Most interviewers chosen were female and all had completed secondary school and were fluent in the local language (Shangaan) and Portuguese.

#### *Interviewer and Supervisor Training*

The interviewers completed three days of training to learn to read the questionnaire fluently and to code responses accurately. This training was conducted by program supervisors and coordinators, all of whom have fourteen years of experience with World Relief's child survival programs in Gaza Province and have participated in at least six previous KPC surveys as well as numerous monitoring surveys. The interviewers were divided into groups of four and each group was assisted by four supervisors. The supervisors used the time in small groups to explain each question. The interviewers also received training on the objectives of the KPC survey and the household selection process. This aspect of the training was conducted by the Program Coordinator with assistance from the Director. See Annex E for a complete listing of person/roles involved with the surveying process and Annex F for the training schedule.

#### *Data Collection*

Data collection occurred December 10-14<sup>th</sup> and included ten teams that spent approximately two to three days per smaller districts and four to five days in the larger districts. The only major constraint was the long distances between villages and the average interview length was approximately 40 minutes. For quality control purposes, each interviewer was accompanied by a supervisor, who observed every interview that took place.

#### *Data Analysis*

The data was hand tabulated December 15-17<sup>th</sup> by the supervisors, coordinators and interviewers. The data was also entered into EpiInfo and analyzed by a MCH Specialist. For quality control purposes, the data from hand tabulations was compared to the data entered into EpiInfo and then conflicts between the

two were investigated and resolved. Additionally, frequency distributions were run on all variables to identify outliers.

## 5. Results

### *Project Indicators captured by the KPC*

Indicator	Baseline findings			95% CI	Target
	Numerator	Denominator	Percentage		
Percentage of respondents that know that TB is transmitted through the air by coughing	62	300	20.7%	12.0%-29.4%	60%
Percentage of respondents that know that cough longer than three weeks is a symptom of TB	40	300	13.3%	8.9%-17.8%	60%
Percentage of respondents surveyed know that TB is curable	256	300	85.3%	80.0%-90.7%	85%
Percentage of respondents surveyed know that TB treatment is available for free	119	300	39.7%	31.2%-48.1%	80%

### *Socio-Demographic Information*

While households within a village were chosen randomly according to the description respondents were selected among those who were willing to participate, were over the age of 18 years, and did not work outside of the country. This last criterion was particularly important as the survey was conducted in the beginning of January when many of the men who work in South Africa the rest of the year were home for the holidays. Including them could alter the more typical male to female ratio in the region and would create difficulties in comparing the results to surveys conducted during other times of the year. Of the respondents, 66.3% (199) were female with the median age of 35.7 years. The oldest respondent was 69 and the youngest was 18 years of age.

Among respondents, 53.3% had the opportunity to attend school. When stratified by gender, 51.3% of females and 57.4% of males attended school, although the difference is not statistically significant. Of those who attended school, 83.8% completed primary school, 15.6% completed secondary school and no one completed a level above secondary school. On average, there were seven people living in a household and most of the homes (59.3%) had one room while 27.0% had two rooms.

When asked about income, 30.7% responded that their monthly household income was not enough to purchase food, 50.7% reported having barely enough for food while 18.3% felt that their income was enough for food.

### *Tuberculosis Symptoms*

As TB symptoms were listed, only 27.3% of the respondents stated that someone in their household had such symptoms in the last three months. Among those, 63.0% were female and the most commonly reported symptoms included coughing with sputum and pain in chest (53.7% each), night sweats (25.6%) and weight loss (23.2%). It is difficult to attempt to quantify the overall prevalence of TB based upon these symptoms, as they are not specific to TB. Of those with TB symptoms, 90.2% sought medical attention. While questions were asked as to why care was not sought the small sample size presents difficulty for adequate evaluation.

### *Tuberculosis Knowledge*

The overwhelming majority (93.3%) of respondents had heard of TB and on average they were able to list two symptoms. Commonly known TB symptoms included coughing (62.3%), weight loss (41.3%) and total weakness (15.7%). Only 13.3% of respondents were able to list coughing longer than three weeks as a symptom of TB. When asked how TB is transmitted, only 20.7% of respondents stated that it was spread through the air by coughing, while 37.3% responded that it was caused through the death of someone, 22.3% did not know, and 13.3% responded that it was sexually transmitted. Outreach regarding TB did not seem to be prominent as only 36.1% respondents had received any information about TB in the past six months and 45.5% of those received the information from friends and family members.

Knowledge that TB is curable was quite high, with 85.3% of respondents stating that in their opinion TB was curable. Among those who had heard of TB and that believed that TB was curable 5.7% responded that they would only seek treatment through traditional medicine. When belief in the curability of TB is stratified by gender or school attendance, no statistical difference was detected. Among those who had heard of TB, 42.5% stated that the treatment is free of charge. When asked where they would go for treatment if they had TB symptoms, 21.1% responded that they would seek non-health facility options such as a traditional doctor, spiritualist or traditional pharmacist.

### *Tuberculosis Treatment*

For the majority of those surveyed, 41.8%, it would take over one hour to walk to the nearest TB testing facility; 25.4% would have to walk less than 15 minutes, 10.0% 16 to 30 minutes, and 7.1% lived within a 30 minute to one hour walk from the nearest testing facility. Only 11.3% of respondents had a household member diagnosed with TB, with the majority (79.4%) of those cases diagnosis through a sputum test. Further examination of those diagnosed with TB is difficult due to the small sample size.

### *Tuberculosis Prevention*

When asked what can be done to prevent the spread of TB, 67.3% of those surveyed were not able to list any method, while 25.7% stated that they could have an annual physical examination, 7.0% responded that they could wear a mask when contacting TB patients and 1.3% said that they could provide good ventilation indoors. More respondents were able to list ways that a TB patient could decrease the risk of transmitting TB to others, with 56.7% able to list at least one method. The most commonly stated method was to adhere to treatment (32.3%).

### *Tuberculosis Stigma*

Only one quarter of those surveyed reported that they had ever had a friend, neighbor, workmate or schoolmate with TB, yet 90.3% responded that they would visit with a TB patient in their home. Among those who responded that they would not do so, fear of disease was the most common reason stated. When asked if someone had TB, would they try to hide the disease from others, 68.0% stated that they would not. However, 29.0% responded that they felt that TB was a shameful disease because it is caused by improper cleansing after death, it is linked to HIV, or because it is a disease of unfaithful people.

### *HIV Knowledge and Stigma*

Knowledge of HIV was almost universal at 99.0%. The most commonly listed methods of preventing HIV were condom use (68.0%), faithfulness (44.8%) and abstinence (20.2%). The average respondent was able to list between one (36.0%) and two (41.8%) methods with the maximum number of responses were

four. When asked about HIV transmission, 91.2% of respondents stated that it is sexually transmitted, 56.2% stated transmission occurs through sharing needles and razors, while 10.1% stated it is transmitted through blood products. The mean number of correct ways that HIV is transmitted listed per respondent was 1.6; 48.8% of those surveyed were able to list two methods of transmission and 36.0% able to list one method.

There was a high knowledge level for where HIV testing is available at 90.2% although 43.3% of the respondents would have to walk over one hour to arrive at the nearest testing facility. The rate of HIV testing is 46.5% with a statistical difference in the rate of testing between men at 35.6% and women at 51.3%.

#### *TB/HIV Co-infection*

Just over half of respondents, 56.9% stated that they believed that someone with HIV should be tested for TB, while 59.3% responded that those with TB should be tested for HIV. When asked if someone with HIV is more likely to get TB 62.3% responded affirmatively.

## **6. Discussion**

### *External Comparisons*

There are no external comparisons available for the information collected by this KPC report for either Gaza Province or Mozambique.

### *Program Implications*

At the time of the proposal, there were only two indicators measured in the KPC survey, percentage of respondents that know that TB is curable and percentage of respondents that know that TB treatment is free. The frequency at which respondents listed that TB was treatable was very high at 85.3%. Therefore, the program goal will be to maintain this indicator at or above present levels. The baseline value for knowledge that TB treatment is free was 42.5% for which the goal of 80% seems reasonable.

The concept that TB is caused through the death of someone and specifically through improper cleansing rituals after someone has died play a critical role in the community's understanding and treatment of TB. Therefore, the program added an indicator to monitor knowledge and beliefs about the ways that TB is transmitted. By the end of the project, the percentage of respondents that know that TB is transmitted through the air by coughing will aim to increase from 20.7% to 60%. Additionally, being able to list long duration cough, or coughing longer than three weeks as a symptom of TB is also important for case detection and referral; however, the baseline results were quite low at 13.3%. Therefore, this will be added as a project indicator with a final target of 60%.

### *Information Dissemination*

Dissemination of results to the MOH took place the Gaza capital, Xai Xai on January 5, 2010. In attendance was the six District Health Directors, the Provincial TB Supervisor as well as a delegated representative for the Provincial Director. Locally, results will be shared with village health committees and Care Group volunteers in conjunction with community mobilization and training, as project staff rotate through each village.

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<sup>18</sup> Instituto Nacional de Estatística. *Censo Geral de População 2007, Evolução de População Total*. Mozambique 2008. <http://www.ine.gov.mz/censo2007> [hereafter Census 2008].

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- <sup>19</sup>Duncan Boughton, David Mather, David Tschirley, Tom Walker, Benedito Cunguara, and Ellen Payongayong. *Changes in Rural Household Income Patterns in Mozambique, 1996-2002, and Implications for Agriculture's Contribution to Poverty Reduction*. Ministry of Agriculture, Directorate of Economics Research Paper Series, December 2006.
- <sup>20</sup>Census 2008
- <sup>21</sup>UNDP. *The Human Development Index - going beyond income: Mozambique 2008*. Washington, 2009.  
[http://hdrstats.undp.org/2008/countries/country\\_fact\\_sheets/cty\\_fs MOZ.html](http://hdrstats.undp.org/2008/countries/country_fact_sheets/cty_fs MOZ.html) [hereafter HDI 2008]
- <sup>22</sup>World Health Organization. WHO Statistical Information System (WSIS) for Mozambique. Geneva, 2008. Available online  
<http://www.who.int/whosis> [hereafter WSIS 2008]
- <sup>23</sup>WSIS 2008
- <sup>24</sup>UNICEF. *Unite for Children, Mozambique*. Available Online [http://www.unicef.org/infobycountry/mozambique\\_2226.html?q=printme](http://www.unicef.org/infobycountry/mozambique_2226.html?q=printme) [hereafter UNICEF 2009]
- <sup>25</sup>Africa Region, Poverty Reduction and Economic Management. *Beating the Odds: Sustaining Inclusion in a Growing Economy. A Mozambique Poverty, Gender, and Social Assessment*. February 2008.
- <sup>26</sup>WSIS 2008
- <sup>27</sup>WSIS 2008
- <sup>28</sup>World Health Organization. *Global TB Control, 121-124*. Geneva, 2008 [hereafter WHO 2009]
- <sup>29</sup>World Health Organization. *Country Profile, Mozambique 2004*. Geneva, 2005.
- <sup>30</sup>Mozambique, National Program for Tuberculosis Control. *National Strategic Plan 2008-2012*. Mozambique 2007. [hereafter NSP 2007]
- <sup>31</sup>WHO 2009
- <sup>32</sup>WHO 2009
- <sup>33</sup>Republic of Mozambique, National AIDS Council. *Universal Declaration of Commitment on HIV and AIDS, Mozambique Progress Report for the United National General Assembly Special Session on HIV and AIDS 2006-2007*. Mozambique 2008. [hereafter HIV 2008]
- <sup>34</sup>NSP 2007
- <sup>35</sup>Gaza Provincial Health Director. *Report on NTP Activities in 2008*. Mozambique 2009. [hereafter Gaza 2009]
- <sup>36</sup>Gaza 2009
- <sup>37</sup>Gaza 2009
- <sup>38</sup>NSP 2007

### Annex A: English Survey Questionnaire

<b>RESPONDENT IDENTIFICATION</b>		
Questionnaire Number		
Interviewer Name		
Respondent Name		
District	1=Chicualacuala, 2= Chigubo, 3= Guija, 4= Mabalane, 5= Massangena, 6=Massingir	
Cluster #		
Village		
Gender	1=Male, 2=Female	
Date of Interview	...../...../.....	
Time interview began	AM	PM
Time interview ended	AM	PM

<b>FOR DATA ENTRY PERSONNEL ONLY</b>		
	<b>Name</b>	<b>Date</b>
Team leader review**:		
Keyed by:		

*\*\*Review for completion – all answers answered, skip patterns followed, etc.*

## SECTION A: SOCIO-DEMOGRAPHICS

Instructions: Ask the questions exactly as they are written. Do not read responses unless directed to do so. Words in *italics* are instructions for the interviewer and should not be read aloud. Follow skip patterns as directed. Write answers in the answer box unless otherwise directed.

#	Questions	Responses	Skip	Answer
1.	How old are you?	Age..... ## Don't know..... 88 No response..... 99		
2.	Have you ever attended school?	Yes..... 1 No..... 0 → 4 Don't know..... 88 → 4 No response..... 99 → 4	3 4 4 4	
3.	<b><i>If yes, then ask:</i></b> What is the highest grade or level of school you have completed?	No School..... 1 Primary..... 2 Secondary..... 3 Past Secondary ..... 4 Other..... 5		
4.	How many people live in your household?	Number..... ## Don't know..... 88 No response ..... 99		
5.	How many rooms are in your house?	Number..... ## Don't know..... 88 No response..... 99		
6.	Is your household income usually...  <b><i>Read responses.</i></b>	Not enough for food..... 1 Barely enough for food..... 2 Enough for food..... 3 Don't know..... 88 No response..... 99		

## SECTION B: TUBERCULOSIS SYMPTOMS

#	Questions	Responses	Skip	Answer
7.	Have you or anyone in your household had any of the following symptoms in the last three months?  <b>Read the following:</b> Coughing with sputum* Coughing for over 3 weeks Increasing fever for over 3 weeks Blood in sputum Pain in the chest Total weakness, inertia Weight loss Night sweats  <i>(definition of sputum = matter coughed up and ejected from the mouth; NOT spit, NOT saliva, NOT mucus from the nose)</i>  <b>Multiple answers are possible.</b>	Yes..... 1 No..... 0 → 14 Don't know..... 88 → 14 No response..... 99 → 14	8 14 14 14	

**For each person with any of the symptoms listed above, ask questions 18-23 and record the answers in the box below.**

8.	What gender was the person who had these symptoms?	Male..... 1 Female..... 2		
9.	Which symptoms did he/she have?	No..... 0 Coughing with sputum* ..... 1 Coughing for over 3 weeks..... 2 Increasing fever for over 3 wks.... 3 Blood in sputum..... 4 Pain in the chest..... 5 Total weakness, inertia..... 6 Weight loss..... 7 Night sweats..... 8 Don't Know..... 88 No response..... 99		
10.	Did this person seek medical attention for his or her symptoms?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99		
11.	After how long getting sick did he or she seek medical attention?	Within one week..... 1 One to two weeks..... 2 Three weeks to a month..... 3 One to two months..... 4 More than three months..... 5		
12.	Why did he/she wait to seek medical attention?  <b>(Answer options for Q.24 and Q.25 are the same)</b>  <b>Do not prompt.</b>	Felt better..... 1 No money to see doctor..... 2 Trying home treatment..... 3 Was too far to travel..... 4 Do not trust or fear health workers..... 5 Fear of having a serious illness..... 6		
13.	If no medical attention was sought, why wasn't it?  <b>(Answer options for Q.24 and Q.25 are the same)</b>  <b>Do not prompt.</b>	Fear of stigma against TB or HIV..... 7 Too busy..... 8 Not aware of consequences of disease..... 9 Other (specify)..... 77 Don't know..... 88 No response..... 99		

Q8. Gender	Q9. Symptoms	Q10. Treatment?	Q11. How long?	Q12. Delay?	Q13. No Tx?

SECTION C: TUBERCULOSIS KNOWLEDGE				
#	Questions	Responses	Skip	Answer
14.	Have you heard of the disease called Tuberculosis or TB?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99	15 22 22 22	
15.	What symptoms can show that a person has TB?  <b>Multiple answers allowed.</b>  <b>Do not prompt.</b>	Coughing..... 1 Fever..... 2 Coughing with sputum..... 3 Coughing for longer than 3 weeks.. 4 Cough with blood in sputum..... 5 Loss of appetite..... 6 Pain in the chest..... 7 Total weakness, inertia..... 8 Weight loss..... 9 Swollen glands..... 10 Night sweats..... 11 Other (specify)..... 77  Don't know..... 88 No response..... 99		
16.	How is TB transmitted?  <b>Multiple answers are possible.</b>  <b>Do not prompt.</b>  <b>Be sure to write any locally held or traditional beliefs.</b>	Through the air by coughing..... 1 Through blood..... 2 Through handshake..... 3 Sexually transmitted..... 4 Sharing food with infected person.. 5 You're born with it..... 6 Through kiss..... 7 After getting cold..... 8 From mosquito bite..... 9 Through the death of someone..... 10 Other (specify)..... 77  Don't know..... 88 No response..... 99		
17.	Have you received any information about TB in the last 6 months?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99	18 19 19 19	

18.	<b>If yes, ask:</b> From which sources did you receive information about TB in the last 6 months?  <b>Don't prompt.</b>	Friends, acquaintances, relatives... 1 Doctors or nurses..... 2 Other medical workers..... 3 Booklets, leaflets..... 4 Radios/TV/ Newspapers..... 5 Volunteers..... 6 Health department..... 7 Pastor..... 8 Other (specify)..... 77  _____ Don't know..... 88 No response..... 99		
19.	In your opinion, is TB curable?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99		
20.	Is TB medicine free of charge?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99		
21.	If you had TB symptoms where would you go to get care?  <b>Multiple answers are possible.</b>	Health center..... 1 Socorrista..... 2 TB Hospital (Carmelo)..... 3 Traditional doctor..... 4 Pharmacy..... 5 Spiritual healer..... 6 Other (specify)..... 77  _____ Don't know..... 88 No response..... 99		
22.	How long would it take you to walk to _____ from here?  <b>Fill in the blank with the nearest TB testing facility to this village.</b>	0-15 minutes..... 1 16-30 minutes..... 2 31 minutes to one hour..... 3 More than one hour..... 4 Don't know..... 88 No response..... 99		

<b>SECTION D: TUBERCULOSIS TREATMENT</b>				
#	Questions	Responses	Skip	Answer
23.	Have you or any of your household members been told by a health care worker that they have TB in the last year?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99	24 34 34 34	
24.	<b>If yes, then ask:</b> What test did health care workers do to find that you or your household member was diagnosed with TB?	Sputum test..... 1 X-ray test..... 2 Other (specify)..... 77  _____ Don't know..... 88 No response..... 99		
25.	How long did it take before you or your	Same day..... 1		

	household member got the test results?	Less than one week..... 2 About one week..... 3 2-3 weeks..... 4 A month or more..... 5 Other (specify)..... 77  Don't know..... 88 No response..... 99		
26.	Did you or your household member pay anything to find out you had TB?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99		
27.	Did you or your household member receive medication to treat TB?	Yes..... 1 No..... 2 Don't know..... 88 No response..... 99	→ 29 28 → 34 → 34	
28.	<b>If no, then ask:</b> Why did you or your household member not receive drugs?	Drugs were not available..... 1 Drugs were too expensive..... 2 Drugs were not offered..... 3 Did not return to pick them up..... 4 Did not want to take drugs..... 5 Feel better..... 6 Don't believe it is necessary..... 7 Other (specify)..... 77  Don't know..... 88 No response..... 99	} → 35	
29.	<b>If yes, then ask:</b> Did you or your household member pay anything for TB medicines?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99		
30.	Did anyone watch you or your household member take the medication daily?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99	31 → 32 → 32 → 32	
31.	<b>If yes, then ask:</b> Who watched you or your household member take the medication?	Health clinic worker..... 1 Socorrista..... 2 Padrinho..... 3 Family or friend (informally, without documenting it)..... 4 Don't know..... 88 No response..... 99		
32.	Did you or your household member complete the course of medication as explained by the health worker?	Yes..... 1 No (Stopped) ..... 0 Still taking medication..... 3 Don't know..... 88 No response..... 99	→ 34 33 → 35 → 34 → 34	

33.	<p><b>If no, then ask:</b> Why did you or your household member stop taking the TB medicine?</p> <p><b>Multiple answers are possible</b></p>	Feel better..... 1 Don't have money..... 2 Drug side effects..... 3 TB drugs are not available..... 4 Health facility is too far..... 5 They move to a different place..... 6 They don't believe it's necessary... 7 Difficult to swallow so many pills... 8 Other (specify)..... 77  _____ Don't know..... 88 No response..... 99		
34.	What was the outcome of the treatment?	Cured..... 1 Not cured..... 2 Haven't finished treatment..... 3 Died..... 4 Don't know..... 88 No response..... 99		

<b>SECTION D: TUBERCULOSIS PREVENTION</b>				
#	Questions	Responses	Skip	Answer
35.	What can you do to decrease the risk of getting of TB?  <b>Do not prompt.</b>  <b>Multiple answers are possible.</b>	Wear a mask when contacting patients with TB..... 1 Provide good ventilation for workplace & home..... 2 Annual medical examination..... 3 Prevent HIV..... 4 Good nutrition..... 5 Other (specify)..... 77  _____ Don't know..... 88 No response..... 99		
36.	What can people with TB do to decrease the risk of transmitting TB?  <b>Do not prompt.</b>  <b>Multiple answers are possible.</b>	Adhere to treatment..... 1 Seek medical care if have symptoms..... 2 Cover mouth when coughing..... 3 Have good ventilation in home..... 4 Not spit in public places..... 5 Avoid delay in TB treatment..... 6 Other (specify)..... 77  _____ Don't know..... 88 No response..... 99		

**SECTION E: TUBERCULOSIS STIGMA**

#	Questions	Responses	Skip	Answer
37.	Have you ever had a friend, neighbor, workmate, or schoolmate with TB?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99		
38.	Would you visit someone with TB in their home?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99	→40 39 →40 →40	
39.	<b>If no, ask:</b> Why would you not visit someone with TB in their home?	Fear of disease..... 1 Other (specify)..... 77  Don't know..... 88 No response..... 99		
40.	If someone has TB, would they try to hide the disease from others?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99	41 →42 →42 →42	
41.	<b>If yes, ask:</b> Why would people with TB try to hide the disease from others?  <b>Multiple answers are possible.</b>	Because they will lose job..... 1 Because they will lose friends..... 2 Because people will avoid them..... 3 Because no-one will marry them... 4 Because people will think they have HIV..... 5 Other (specify)..... 77  Don't know..... 88 No response..... 99		
42.	Do you think it is shameful to have TB?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99	43 →44 →44 →44	
43.	<b>If yes, ask:</b> Why do you think it is shameful to have TB?  <b>Multiple answers are possible.</b>	This is a disease of unfaithful people..... 1 Because the person with TB can lose job..... 2 Because everybody will avoid person with TB..... 3 Because it means the person is or may be HIV+..... 4 Improper cleansing after death..... 5 Other (specify)..... 77  Don't know..... 88 No response..... 99		

**SECTION F: HIV KNOWLEDGE, STIGMA, ETC.**

#	Questions	Responses	Skip	Answer
44.	Have you heard about the disease called HIV or AIDS?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99	45 End 45 45	
45.	How can you protect yourself from getting HIV?  <b>Multiple answers are possible.</b>  <b>Do not prompt.</b>	Abstinence..... 1 Faithfulness..... 2 Condom use..... 3 Avoid skin piercing objects..... 4 Prompt STI treatment..... 5 Being attended to by a trained service provider during pregnancy and delivery..... 6 Infant feeding options..... 7 Use of ART..... 8 Other (specify)..... 77  Don't know..... 88 No response..... 99		
46.	How is HIV transmitted?  <b>Multiple answers are possible.</b>  <b>Do not prompt.</b>	Through the air when coughing..... 1 Through a handshake ..... 2 Sexually transmitted..... 3 Sharing food with infected person... 4 Through blood transfusion..... 5 Through kiss..... 6 Sharing needles/razors..... 7 From mother to child during pregnancy..... 8 Breastfeeding..... 9 Witchcraft..... 10 Other (specify)..... 77  Don't know..... 88 No response..... 99		
47.	Do you know where you can get tested for HIV?	Yes (specify)..... 1  No..... 0 Don't know..... 88 No response..... 99	48 49 49 49	
48.	<b>If yes, ask:</b> How long would it take you to walk to the nearest HIV testing centre from here?	0-15 minutes..... 1 16-30 minutes..... 2 31 minutes to one hour..... 3 More than one hour..... 4 Don't know..... 88 No response..... 99		
49.	I don't want to know the result, but have you ever had an HIV test?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99		

SECTION G: TB-HIV Co-INFECTION				
#	Questions	Responses	Skip	Answer
50.	Do you think that someone with HIV should be tested for TB?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99		
51.	Do you think that someone with TB should be tested for HIV?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99		
52.	Are you more likely to get TB if you have HIV?	Yes..... 1 No..... 0 Don't know..... 88 No response..... 99		

Thank you. This is the end of the survey. We appreciate you taking the time to respond to our questions. Do you have any questions for me at this time?

**INTERVIEWER COMMENTS:**

**Please record any comments or observations that you feel that are necessary to understand the circumstances in which you conducted this interview:**

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Time interview Ended \_\_\_\_\_ (Please also record this time on Page 1)

**SUPERVISOR** (Questionnaire reviewed) \_\_\_\_\_ (initial here)

Date \_\_\_\_\_ Time \_\_\_\_\_

### Annex B: Shangaan Survey Questionnaire

IDENTIFICACAO DE RESPONDENTE		
Numero ya Questionario		
Vito ra muvutissi		
Vito ra muhlamuli		
Districto	1=Chicualacuala, 2= Chigubo, 3= Guija, 4= Mabalane, 5= Massangena, 6=Massingir	
Grupo #		
Aldeia		
Genero	1=wanuna, 2=wansati	
Siku ra swivutiso	...../...../.....	
Nkama wo sungula swivutiso	Mixo	Madyambu
Nkama wo heta swivutiso	Mixo	Madyambu

NTSENA NTLAWA LOWU NGA TA ENDLA PROCESSAMENTO YA MADADOS EKA COMPUTADOR		
	Vito	Siku
Murhangeri wa ntlawa la kambisisaka**:		
La processaraka:		

\*\*Vonelela leswaku tinhlamulo ti tsaliwile kwatsi – Swivutiso hinkwaswo, ni leswaku hinkwako lomu ku fanelaka ku tlula swi landziwile, ni swinwana.

SECCAO A: MATSHAMELO				
Swileleto: Endla swivutiso tani hilaha swi nga tsaliwa ha kona. U nga hlayi tinhlamulo handle ka loko swi kombela. <i>Marito lawa ma tsaliweke hi xitalic swileleto</i> swa muvutisi kutani a ma hlayiweli muvutisiwa. Lomu swikombelaka ku tlula landza tani hi leswi kombelisaka xiswona. Tsala tinhlamulo eka xibokisana lexi nyikiweke kumbe lomu swi fanelaka.				
#	Swivutiso	Nhlamulo	Yana	Nhlamulo
53.	Xana u na malembe mangani yaku velekiwa	Ntanga ..... ## A nga tivi ..... 88 A nga hlamulanga ..... 99		
54.	Xana u vile na wona nkateko wo nghena xikola	Ina ..... 1 E-e..... 0 → 4 A nga tivi ..... 88 → 4 A nga hlamulanga ..... 99 → 4	3 4 4 4	
55.	Xana u dyondze ku fika eka ntlawa muni exikolweni?	A nga fundhanga ..... 1 Primaria..... 2 Secundaria ..... 3 Nivel superior ..... 4 Swinwana..... 5		

56.	Xana I vanhu vangani va hanyaka lana ndyanguini	Nhlayo ..... ## A nga tivi..... 88 A nga hlamulanga ..... 99		
57.	Yindlu ya wena yini ma quarto ma ngani?	Rinwe ..... 1 Mambirhi..... 2 Manharhu ..... 3 Mune ni ku tlula ..... 4 A nga tivi..... 88 A nga hlamulanga ..... 99		
58.	Ka leswi u swi tirhaka swa ringana ku hlayisa ndyangu wa wena?  <b>Hlaya tinhlamulo</b>	A wu ringani ka swakudya ..... 1 Wu ringana katsongo swakudya ... 2 Wu ringana swakudya ..... 3 A nga tivi..... 88 A nga hlamulanga ..... 99		

### SECCAO B: SWIKOMBISO SWA NDERE

#	Swivutiso	Tinhlamulo	Yana	tinhlamulo
59.	Eka tinwheti tinharhu leti nga hundza, wena kumbe unwe wa ndyangu wa wena a vile ni swikombiso leswi landzelaka?  <b>Hlaya leswi landzelaka:</b> Mukhuhlwana lowu nga ni xikhohlola* Ku khohlolela ku tlula mavhiki manharhu Ku hisa miri ku tlula mavhiki manharhu Ngati ka xikhohlola Ku vava ka xifuva Ku karhala, u nga tsakeli swakudya Ku ondza Ku badlha ni vusiku  (Nhlamuselo ya xikhohlola =swi huma ka xifuva, A HI marhi, A HI marhimila ya tinhopfu)  <b>Tinhlamulo ti nga tlula yinwe.</b>	Ina..... 1 E-e..... 0 A nga tivi ..... 88 A nga hlamulanga ..... 99	8 → 14 → 14 → 14	
<b>Eka unwana ni unwana loyi a nga ni swikombiso leswi nga tsaliwa ehenhla, endla swivutiso 8-13 u tsala tinhlamulo eka swibokisana lana hanshi.</b>				
60.	A nga va munhu wa ndyani loyi a nga va ni swikombiso leswi?	Wa nuna..... 1 Wansati ..... 2		

61.	Xana a nga va swikombiso muni leswi va nga ve na swona?	E-e..... 0 Mukhuhlwana wa xikhohlola * ... 1 Mukhuhlwana wo tlula mavhiki manharhu ..... 2 Hisa miri kutlula mavhiki manharhu ..... 3 Ngati eka xikhohlola ..... 4 Vavisa xifuva ..... 5 Ku karhala, u nga tsakeli kudya.. 6 Ku ondza ..... 7 Badlha nivusiku ..... 8 A nga tivi..... 88 A nga hlamulanga ..... 99			
62.	Xana munhu loyi a tsame a lavetela ku laphiwa a xibedlela loko a vone swikombiso leswi?	Ina ..... 1 E-e ..... 0 A nga tivi..... 88 A nga hlamulanga ..... 99	11 13 13 13		
63.	Xana munhu loyi a lavetele ku pfuniwa exibelhela endzaku ka nkarhi muni na a sungule ku vabya?	Endzeni ka vhiki..... 1 Linwe kumbe mavhiki mambire..... 2 Mavhiki manharhu ku fika nwati..... 3 Nwati kumbe tinwati timbiri..... 4 Kutlula tinwati tinharhu..... 5			
64.	Hikwalaho ka yini a munhu loyi a hlwelile ku laphiwa a xibehlela? <b>(Mavonela ya tinhlamulo ta xiv.12 ni 13 ta fana)</b> <b>U nga khutazi tinhlamulo.</b>	A titwile na antswa..... 1 Ku pfumala a male yo ya ka dokodela..... 2 Ku ringeta ku laphiwa a kaya..... 3 A m'pfuka wu lehile..... 4 Ku kala ku tshemba kumbe ku chava va tirhi va xibedhlela..... 5			
65.	Xana loko munhu loyi a nga lavetelanga ku pfuniwa exibedlela, a nga va a li hi mhaka muni? <b>(Tinhlamulo ta xiv.12 ni 13 ta fana)</b> <b>U nga khutazi tinhlamulo.</b>	Ku chava kuva ni mavabyi yo tika 6 Ku va ni tingana ta ku txepetiwa hikwalaho ka TB kumbe HIV..... 7 Ku pfumala a nkama..... 8 Ku chava leswi swi taka ndzaku ka mavabyi lawa..... 9 Swinwana(hlamusela)..... 77 A nga tivi..... 88 A nga hlamulanga ..... 99			
Q8.	Q9. swikombiso	Q10. Kulaphiwa/	Q11.nkarhi wo laphiwa ?	Q12. Ku hlwela?	Q13. A kuna tratamento? Tx

**SECCAO C: VUTIVI HI TLHELO LA NDERE**

#	Swivutiso	Tinhlamulo	Yana	tinhlamulo
66.	Xana u tshama u twa hi ta ndere?	Ina ..... 1 E-e ..... 0 A nga tivi..... 88 A nga hlamulanga ..... 99	15 23 23 23	
67.	Xana hi swihi swikombiso leswi nga kombaka leswaku munhu a ni ndere?  <b>Tinhlamulo to tlula yinwe.</b>  <b>U nga khutazi tinhlamulo.</b>	Ku khohlola..... 1 Ku hisa miri..... 2 Mukhuhlwana wa xikhohlola..... 3 ku khohlola ku tlula mavhiki manharhu..... 4 Ngati eka xikhohlola ..... 5 ku kala ku navela swakudla..... 6 ku vava ka xifuva..... 7 Ku hela ntamu,u nga tsakeli kudya 8 Ku ondza..... 9 Timbhiapho eka nhamu ..... 10 Ku badhla nivusiku..... 11 Swinwana(hlamusela)..... 77 A nga tivi ..... 88 Anga hlamulanga ..... 99		
68.	A ndere yi tlulela hi ndela yihi?  <b>Tinhlamulo to tlula yinwe.</b>  <b>U nga khutazi tinhlamulo</b>  <b>Tsala swinwana ni swinwana leswi vanhu va khomelelaka ka swona ni leswi hi ntumbuluko va pfumelaka ka swona.</b>	Hi moya loko munhu a khohlola..... 1 Hi ngati..... 2 Hi ku khomana mavoko..... 3 Hi ndlela ya masangu..... 4 Ku dya swinwe ni loyi a vabyaka... 5 Ku velekiwa na wona ..... 6 Hi ku tswontswana ..... 7 Ndzaku ka ku ngheniwa hi xirhami..... 8 Hi ku lumiwa hi nsuna..... 9 Hi ku fa ka unwe wa ndyangu ... 10 Swinwana(hlamusela)..... 77 A nga tivi ..... 88 A nga hlamulanga ..... 99		
69.	Xana u tshame u twa mahungu hi tlelo la ndere eka 6 wa tinwheti leti nga hundza?	Ina..... 1 E-e ..... 0 A nga tivi ..... 88 A nga hlamulanga ..... 99	18 19 19 19	

70.	<b>Koko a ku ina, vutisa:</b> Xana u ma twe kwihi mahungu ya mavabyi ya ndere eka tinwheti ta 6 leti nga hundza?  <b>U nga khutazi tinhlamulo</b>	Vanghana, vanhu, maxaka ..... 1 Dokodela kumbe Enfermeira..... 2 Vanwana vatirhi va xibelhela..... 3 Folheto, panfletos ..... 4 Radio/TV/ma jornal ..... 5 Ka vavoluntaria..... 6 Ndzawulo ya vudaho ..... 7 Mufundise ..... 8 Vanwana, (Hlamusela) ..... 77  A nga tivi ..... 88 A nga hlamulanga..... 99		
71.	Hi mavonele ya wena, yi nga va ndere yi laphiwa?	Ina ..... 1 E-e ..... 0 A nga tivi..... 88 A nga hlamulanga ..... 99		
72.	Mirhi ya ndere ya hakeliwa kumbe mahala?	Ina ..... 1 E-e ..... 0 A nga tivi ..... 88 A nga hlamulanga ..... 99		
73.	Loko u vile ni swikombiso swa ndere a wu ta ya laphiwa kwihi  <b>Tinhamulo to tlula yinwe.</b>	Centro de Saude..... 1 Socorrista..... 2 Carmelo..... 3 Nyanga..... 4 Farmacia..... 5 Profeta/Mazoni(prophet or Zionist) 6 Vanwana (hlamusela)..... 77 A nga tivi ..... 88 A nga hlamulanga..... 99		
74.	Xana I nga va nkarhi muni u nga tekaka hi ku famba hi minenge u ya C.S ya le kusuhi leyi kambelaka ndere? _____?  <b>Tsala eka ndhawu leyi nga siyiwa vito la xibelhela xa le kusuhi xa ku kambela ndere</b>	0-15 wa timeneti..... 1 16-30 wa timeneti..... 2 31wa timeneti ku fika awara..... 3 Ku tlula awara..... 4 A nga tivi ..... 88 A nga hlamulanga ..... 99		

<b>SECCAO D: MALAPHELE YA NDERE</b>				
#	Swivutiso	Tinhlamulo	Yana	tinhlamulo
75.	Xana wena kumbe unwe wa ndyangu wa wena mi nga va mi hlamuseliwile hi mutirhi wa xibelhela leswaku mi ni ndere eka lembe leri nga hundza?	Ina ..... 1 E-e ..... 0 A nga tivi ..... 88 A nga hlamulanga ..... 99	24 35 35 35	
76.	<b>Loko a ku ina, vutisa vutisa:</b> Xana i swikambelo muni leswi va xibelhela va swi endleke leswaku va tsumbula leswaku vanhu lava va na ndere	Ku kambela xikhohlola..... 1 Mufoto wa xifuva ..... 2 Swinwana (hlamusela)..... 3 A nga tivi..... 4 A nga hlamulanga ..... 5		
77.	Swi nga va swi teke nkarhi muni ku kuma a nhlamulo ya swikambelo swa	Siku lolelo..... 1 Hansi ka vhiki..... 2		

	wena kumbe vanwana va ndyangu wa wena?	Swi tekile vhiki..... 3 2-3 wa mavhiki..... 4 Nweti kumbe ku tlula..... 5 Swinwana (hlamusela)..... 77 A nga tivi ..... 88 Anga hlamulanga ..... 99		
78.	Xana wena kumbe va ndyangu wa wena mu hakele nchumu ku kambeliwa ndere?	Ina ..... 1 E-e ..... 0 A nga tivi ..... 3 A nga hlamulanga ..... 4		
79.	Xana wena kumbe va ndyangu wa wena mu nyikiwile murhi wa ndere?	Ina ..... 1 E-e ..... 2 A nga tivi ..... 88 A nga hlamulanga ..... 99	29 28 35 35	
80.	<b>Loko a ku e-e, vutisa</b> Hikwalaho ka yini wena kumbe vandyangu wa wena va nga nyikiwanga mirhi?	A ku nga na mirhi ..... 1 A wu durha ..... 2 Mirhi a yi nyikeliwile ..... 3 A ni vuyanga ni teka ..... 4 A ni nga swi lavi ku teka mirhi.... 5 A swi antswa..... 6 A ni kholwanga leswaku a swi laveka ..... 7 Swinwana (tsala) ..... 77 A nga tivi ..... 88 A nga hlamulanga ..... 99	35	
81.	<b>Loko a ku ina, vutisa:</b> Xana wena kumbe va dyangu wa wena mu hakele nchumu ku kuma a murhi?	Ina ..... 1 E-e ..... 0 A nga tivi ..... 88 A nga hlamulanga ..... 99		
82.	Xana ku nga va ni loyi a ku vonelalaka wena kumbe va ndyangu wa wena loko mi phuza murhi?	Ina ..... 1 E-e ..... 0 A nga tivi ..... 88 A nga hlamulanga ..... 99	31 32 32 32	
83.	<b>Loko a ku ina, vutisa:</b> I mani loyi a ku voneleleka kumbe a vonelala va ndyangu loko va phuza murhi?	Mutirhi wa xibelhela ..... 1 Socorrista..... 2 Padrinho..... 3 Va ndyangu / Munghana..... 4 Voluntaria(Volunteer)..... 5 A nga tivi ..... 88 A nga hlamulanga ..... 99		
84.	Xana wena kumbe va ndyangu wa wena mi phuze murhi nkarhi wo ringana tani hi leswi mi nga hlamuselisiwa swona hi vatirhi va xibelhela?	Ina ..... 1 E-e (hi tsemerisile) ..... 0 A ha phuza murhi ..... 3 A nga tivi ..... 88 A nga hlamulanga ..... 99	34 33 35 34 34	
85.	<b>Loko a ku e-e, vutisa:</b> Hikwalawo ka yini wena kumbe va ndyangu wa wena mi nyimile ku phuza murhi wa ndere?  <b>Tinhlamulo ti nga tlula yinwe</b>	Ku twa ku antswa ..... 1 A hi na male ..... 2 Murhi wa hi vabyisa ..... 3 Mirhi ya ndere a yi kumeki ..... 4 Xibedlhela xi le kule swinene ..... 5 Va rurha va ya eka tindhawu tinwana ..... 6 A va kholwi leswaku swa laveka ..... 7 Swa karhata ku n'wa makinina yo		

		tala ..... 8 Swinwana (Hlamusela)..... 77		
		_____ 88 A nga tivi..... 88 A nga hlamulanga ..... 99		
86.	Yi ve yihi mihandzu/nhlamulo yaku laphiwa?	Ni hanyile..... 1 A ni hanyanga..... 2 Ani se heta ku laphiwa..... 3 A file..... 4 A nga tivi ..... 5 A nga hlamulanga ..... 6		

<b>SECCAO E: KU VIKELA NDERE</b>				
#	Swivutiso	Tinhlamulo	Yana	tinhlamulo
87.	U nga endla yini ku hunguta nghozi ya kuva u khomiwa hi ndere?  <b>U nga khutazi tinhlamulo.</b>  <b>Tinhlamulo ti nga tlula yinwe.</b>	Pfala tinhopfu hi mascara loko u hlangana ni va ndere ..... 1 Ku hungisa moya wa kahle etindhaweni ta ntirho hambu kaya.. 2 Kambeliwa lembe ni lembe hi dokodela ..... 3 Vikela HIV ..... 4 Kuva ni madyele ya kwatsi ..... 5 Swinwana (hlamusela) ..... 77  _____ 88 A nga tivi..... 88 A nga hlamulanga ..... 99		
88.	Xana vanhu va nga ni ndere va nga endla yini ku hunguta nghozi ya ku tluleta vanwani mavabyi?  <b>U nga khutazi tinhlamulo.</b>  <b>Tinhlamulo ti nga tlula yinwe.</b>	Va fanele va laphiwa ..... 1 Loko va ni swikombiso va lavetela ku pfuniwa hi va dokodela..... 2 Pfala nomo loko u khohlola ..... 3 Yindlu yi fanela yi hunga moya.... 4 U nga tshwuteli marhi eka tindhawu ku famba-fambaka vanhu ..... 5 Vikela ku hlwela ku sungula ku laphisa ndere ..... 6 Swinwana (hlamusela)..... 77  _____ 88 A nga tivi ..... 88 A nga hlamulanga ..... 99		

<b>SECCAO F: KU TXEPETIWA HIKWALAHO KA NDERE</b>				
#	Swivutiso	Tinhlamulo	Yana	tinhlamulo
89.	Xana u tshame u ni munghana, muyakelani, mutirhisani, kumbe munhu mi dyondzaka swinwe loyi a nga ve ni ndere?	Ina ..... 1 E-e ..... 2 A nga tivi ..... 3 A nga hlamulanga ..... 4		

90.	Xana munhu loyi a nga ni ndere u nga mu pfluxela ekaya ka yena?	Ina ..... 1 E-e ..... 0 A nga tivi ..... 88 A nga hlamulanga ..... 99	→40 39 →40 →40	
91.	<b>Loko a ku e-e, vutisa:</b> Hikwalaho ka yini a wu nga mu pfluxeli munhu loyi a nga ni ndere ekaya ka yena?	Tshava mavabyi ..... 1 Swinwana (hlamusela)..... 77  A nga tivi ..... 88 A nga hlamulanga ..... 99		
92.	Loko munhu a ni ndere, va nga ringeta ku fihlela mavabyi vanwana?	Ina ..... 1 E-e ..... 0 A nga tivi ..... 88 A nga hlamulanga ..... 99	41 →42 →42 →42	
93.	<b>Loko a ku ina, vutisa:</b> Xana hikwalaho ka yini vanhu va ndere va nga fihlela vanwana mavabyi?  <b>Tinhlamulo ti nga tlula yinwe.</b>	Va nga heleliwa hi ntirho..... 1 Va nga luza vanghana ..... 2 Vanhu va nga va papalata ..... 3 A nga kona loyi a nga mu chadaka 4 Vanhu va nga ehleketa leswaku va ni HIV/SIDA..... 5 Swinwana (hlamusela)..... 77  A nga tivi ..... 88 A nga hlamulanga ..... 99		
94.	Xana u ehleketa leswaku swini tingana ku va ni ndere?	Ina..... 1 E-E ..... 0 Anga tivi ..... 88 A nga hlamulanga ..... 99	43 →44 →44 →44	
95.	<b>Loko a ku ina, vutisa:</b> Hi kwalaho ka yini u ehleketa leswaku swi ni tingana?  <b>Tinhlamulo ti nga tlula yinwe.</b>	Mavabyi ya lava nga tshembekangiki ..... 1 Hikuva muvabyi a nga heleliwa hi ntirho ..... 2 Hinkwavo vanhu vata nwi nyenya muvabyi wa ndere ..... 3 Hileswaku va nga mu pimisela SIDA ..... 4 Va nga va va nga txinganga kwatsi ndzhaka ... 5 Swinwana (hlamusela)..... 77  A nga tivi..... 88 A nga hlamulanga ..... 99		

### SECCAO G: VUTIVI HI TLELO LA HIV, KU TXEPETIWA, NI SWINWANAC.

#	Swivutiso	Tinhlamulo	Yana	tinhlamulo
96.	U tsame u twa hi ta HIV kumbe SIDA?	Ina..... 1 E-e ..... 0 A nga tivi ..... 88 A nga hlamulanga ..... 99	45 → End 45 45	
97.	Unga ti vikelisa ku yini leswaku u nga kumi HIV?	Fularhela masangu ..... 1 Ku tshembeka..... 2		

	<b>Tinhlamulo ti nga tlula yinwe.</b> <b>U nga khutazi.</b>	Tirhisa xitlhango ..... 3 Vikela switirho leswi tsemaka mirhi 4 Hatla ku laphisa mavabyi ya masangu ..... 5 Loko u na khwiri laphiwa u tlhela u velekisiwa hi munhu loyi a nga dyondzisiwa ..... 6 U nga hlawula tindlela ta ku hambana-hambana ta madyisela ya nwana ..... 7 Ku phuza murhi wa Anti-retroviral Swinwana (hlamusela)..... 77  A nga tivi ..... 88 A nga hlamulanga ..... 99		
98.	Xana munhu a yi kumisa ku yini HIV? <b>Tinhlamulo ti nga tlula yinwe.</b> <b>U nga khutazi.</b>	Hi moya loko va khohlola ..... 1 Hi ku qhevelana ..... 2 Hi masangu..... 3 Ku dya swinwe ni munhu loyi a nga ni xitsongua-tsonguana ..... 4 Ku cheliwa ngati ..... 5 Hi ku tswontswana ma kiss..... 6 Ku tirhiselana tinayithi/swisinguana ..... 7 Mamana a nga tluleta nwana loko a ni khwirhi ..... 8 Hi ku yanwisa ..... 9 Hi vuloyi ..... 10 Swinwana (hlamusela)..... 77  A nga tivi..... 88 A nga hlamulanga ..... 99		
99.	Wa swi tiva leswaku u nga kambeliwa kwini a HIV?	Ina (hlamusela)..... 1 E-e..... 0 A nga tivi ..... 88 A nina hlamulo..... 99	48 49 49 49	
100.	<b>Loko a ku ina, vutisa:</b> I nkama muni u nga tekaka ku famba hi minenge u ya fika eka ndhawu ya le kusuhi lana u nga kambeliwaka kona?	0-15 minutos..... 1 16-30 minutos..... 2 31 minutos ku fika awara ..... 3 Kutlula awara ..... 4 A nga tivi ..... 88 A nga hlamulanga ..... 99		
101.	A ni naveli ku tiva nhlamulo ya wena ya xikambelo xa HIV, xana u tshame u endla xikambelo xexo ke?	Ina..... 1 E-e ..... 0 Anga tivi ..... 88 A A nga hlamulanga ..... 99		

### SECCAO H: KU FAMBELANA KA TB NI HIV (CO-INFECTION)

#	Swivutiso	Tinhlamulo	Yana	tinhlamulo
102.	Xana u ehleketa leswaku munhu a nga ni HIV a a fanela a kambeliwa ndere?	Ina..... 1 E-e ..... 0 Anga tivi ..... 88		

		A nga hlamulanga .....	99		
103.	Xana u ehleketa leswaku munhu loyi a nga ni ndere a a fanele ku kambeliwa HIV?	Ina .....	1		
		E-e .....	0		
		A nga tivi .....	88		
		A nga hlamulanga .....	99		
104.	Swi nga ku olovela ku kuma ndere loko u ni HIV?	Ina.....	1		
		E-e.....	0		
		A nga tivi.....	88		
		A nga hlamulanga .....	99		

Ha khensa. Loku I ku hela ka swivutiso. Hi khensa nkama lowu u tinyikeke ku hlamula swivutiso leswi. Xana u nga va ni xivutiso u lavaka ku endla sweswi?

**COMENTARIOS DA ENTREVISTADORA:**

***Tsala swinwana ni swinwana kumbe ma observacao, leswi u twaka leswaku swa laveka ku va hi twisisa leswi humeleleke loko u li karhi u endla swivutiso leswi:***

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Nkarhi wo heta swivutiso \_\_\_\_\_ (Tsala nkarhi lowu ni le ka pagina 1)

**SUPERVISOR** (la endlaka revisao ya questionnaire) \_\_\_\_\_ (Assinatura)

Siku \_\_\_\_\_ Nkama \_\_\_\_\_

## Annex C: Raw Data Tables

### Gender

	Frequency	Percent	95% CI
Male	101	33.7%	28.4%-39.0%
Female	199	66.3%	61.0%-71.7%
Total	300		

### Age

Age Range	Frequency	Percent	95% CI
>13 - 19	18	6.0%	2.7%-9.3%
>20 - 29	73	24.3%	19.5%-29.2%
>30 - 39	99	33.0%	26.5%-39.5%
>40 - 49	46	15.3%	11.7%-19.0%
>50 - 60	25	8.3%	4.9%-11.7%
>60	13	13.0%	2.2%-6.5%
Don't know	26	8.7%	2.4%-13.5%
Total	300	100.0%	

Mean= 35.7 years, SE= 0.630; Min=13; Max=69

### Have you ever attended school?

	Frequency	Percent	95% CI
No	139	46.3%	39.3%-53.4%
Yes	160	53.3%	46.2%-60.5%
Unknown	1	0.3%	0-1.0%
Total	300		

	Yes, attended school			No school		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
Female	105	51.3%	43.0%-59.5%	96	48.2%	40.0%-56.5%
Male	58	57.4%	47.8%-67.0%	43	42.6%	33.0%-52.2%

Odds ratio = 1.28 (0.83-1.985)

### What is the highest grade or level of school you have completed?

	Frequency	Percent	95% CI
No school	01	0.6%	0-1.9%
Primary school	134	83.8%	74.5%-93.0%
Secondary school	25	15.6%	6.2%-25.0%
Past secondary school	0	0	0
Total	160		

How many people live in your household?

	Frequency	Percent	95% CI
1	5	1.7%	0.3%-3.1%
2	11	3.7%	1.4%-6.0%
3	19	6.3%	3.2%-9.5%
4	36	12.0%	7.7%-16.3%
5	37	12.3%	7.9%-16.8%
6	30	10.0%	6.6%-13.4%
7	41	13.7%	10.0%-17.6%
8	28	9.3%	6.1%-12.6%
9	25	8.3%	5.4%-11.3%
10	28	9.3%	5.5%-13.1%
11	9	3.0%	1.0%-5.0%
12	10	3.3%	0.9%-5.8%
13	6	2.0%	0.5%-3.5%
14	4	1.3%	0-3.0%
15	3	1.0%	0-2.1%
16	3	1.0%	0-2.1%
17	1	0.3%	0-1.0%
21	1	0.3%	0-1.0%
22	1	0.3%	0-1.0%
26	1	0.3%	0-1.0%
28	1	0.3%	0-1.0%
Total	300		

Mean= 7.2; SE= 0.28; Min=1; Max=28

How many rooms are in your house?

	Frequency	Percent	95% CI
1	178	59.3%	49.7%-68.9%
2	81	27.0%	20.1%-33.9%
3	26	8.7%	5.2%-12.2%
4	15	5.0%	1.8%-8.2%
Total	300		

Number of people per room (rounded to the nearest whole number)

PPR	Frequency	Percent	95% CI
1	12	4.0%	1.9%-6.1%
2	33	11.0%	2.3%-6.3%
3	48	16.0%	10.9%-21.1%
4	54	18.0%	13.8%-22.2%
5	42	14.0%	9.9%-18.1%

6	27	9.0%	5.6%-12.4%
7	25	8.3%	5.4%-11.3%
8	13	4.3%	2.0%-6.7%
9	15	5.0%	2.5%-7.5%
10	9	3.0%	0.8%-5.2%
11	8	2.7%	0.7%-4.6%
12	3	1.0%	0-2.1%
13	3	1.0%	0-2.1%
14	2	0.7%	0-1.6%
15	2	0.7%	0-1.6%
16	2	0.7%	0-1.6%
21	1	0.3%	0-1.0%
28	1	0.3%	0-1.0%
Total	300	100.0%	

Number of people per room (grouped)

	Yes			No		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
<= 2	41	13.7%	8.5%-18.8%	259	86.3%	82.1%-91.5%
>2 & <=4	106	35.3%	29.2%-41.5%	194	64.7%	58.5%-70.8%
>4 & <=6	69	23.0%	18.0%-28.0%	231	77.0%	72.0%-82.0%
>6 & <=8	38	12.7%	9.3%-16.1%	262	87.3%	83.9%-90.7%
>8 & <=10	24	8.0%	4.5%-11.5%	276	92.0%	88.5%-95.5%
>10 & <=12	11	3.7%	1.4%-6.0%	289	96.3%	94.0%-98.6%
>12 & <=14	5	1.7%	0.3%-3.1%	295	98.3%	96.9%-99.7%
>14 & <=16	4	1.3%	0-2.6%	296	98.7%	97.4%-100%
>=20	2	0.7%	0-2.0%	298	99.3%	98.0%-100%

Is your household income usually...

	Frequency	Percent	95% CI
Not enough for food	92	30.7%	21.2%-40.1%
Barely enough for food	152	50.7%	43.1%-58.2%
Enough for food	55	18.3%	12.5%-24.1%
Don't know	1	0.3%	0-1.0%
Total	300		

7. Have you or anyone in your household had any of the following symptoms in the last three months?

	Frequency	Percent	95% CI
No	218	72.7%	66.5%-78.9%
Yes	82	27.3%	21.1%-33.5%
Total	300		

8A. What gender was the person who had these symptoms?

	Frequency	Percent	95% CI
Male	30	37.0%	24.8%-49.3%
Female	51	63.0%	50.7%-75.2%
Total	81		

What gender was the person who had these symptoms?

	Frequency	Percent	95% CI
Missing*	1	1.2%	0-6.6%
Male	30	36.6%	26.2%-48.0%
Female	51	62.2%	50.8%-72.7%
Total	82		

\*Due to analysis with EpiInfo, cluster analysis and missing values can not be run together

9. Which symptoms did he/she have?

	Yes			No		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
None	0	0	0	82	100%	100%
Coughing with sputum	44	53.7%	41.6%-65.7%	38	46.3%	34.3%-58.4%
Cough for over 3 wks	16	19.5%	11.0%-28.0%	66	80.5%	72.0%-89.0%
Increasing fever for over 3 wks	16	19.5%	11.0%-28.0%	66	80.5%	72.0%-89.0%
Blood in sputum	12	14.6%	6.4%-22.9%	70	85.4%	77.1%-93.6%
Pain in chest	44	53.7%	38.8%-68.5%	38	46.3%	31.5%-61.2%
Total weakness	17	20.7%	13.9%-27.5%	65	79.3%	72.5%-86.1%
Weight loss	19	23.2%	12.0%-34.4%	63	76.8%	65.6%-88.0%
Night sweats	21	25.6%	16.8%-34.4%	61	74.4%	65.6%-83.2%
Don't know	0	0	0	82	100%	100%
No response	0	0	0	82	100%	100%

10. Did this person seek medical attention for his or her symptoms?

	Frequency	Percent	95% CI
No	8	9.8%	2.7%-16.8%
Yes	74	90.2%	83.2%-97.3%
Total	82		

11. If yes, how long after getting sick did he/she seek medical attention?

	Frequency	Percent	95% CI
Within one week	31	41.9%	27.4%-56.4%
One to two weeks	14	18.9%	7.7%-30.1%
Three weeks to one month	18	24.3%	6.3%-41.4%
One to two months	5	6.8%	1.0%-12.5%
More than three months	6	8.1%	1.9%-14.3%
Total	74		

12. Why did he/she wait to seek medical attention?

	Frequency	Percent	95% CI
Felt Better	16	21.6%	10.7%-32.6%
No money	15	20.3%	9.9%-30.7%
Trying home treatment	9	12.2%	4.0%-20.3%
Was too far to travel	3	4.1%	0-8.5%
Do not trust or fear health workers	1	1.4%	0-4.1%
Fear of having a serious illness	1	1.4%	0-4.1%
Fear of stigma against TB or HIV	0	0	0
Too busy	0	0	0
Not aware of consequences	0	0	0
Other	23	31.1%	19.6%-42.6%
Don't know	1	1.4%	0-4.1%
No response	5	6.8%	0.7%-12.8%
Total	74		

12. Of those who waited more than two weeks, why did he/she wait to seek medical attention?

	Frequency	Percent	95% CI
Felt Better	7	24.1%	8.9%-39.4%
No money	9	31.0%	11.6%-50.5%
Trying home treatment	7	24.1%	5.7%-42.6%
Was too far to travel	0	0	0
Do not trust or fear health workers	1	3.4%	0-11.1%
Fear of having a serious illness	0	0	0
Fear of stigma against TB or HIV	0	0	0
Too busy	0	0	0
Not aware of consequences	0	0	0
Other	4	13.8%	0-27.8%
Don't know	1	3.4%	0-10.5%
No response	0	0	0
Total	29		

13. If no medical treatment was sought, why?

	Frequency	Percent	95% CI
Felt Better	0	0	0
No money	3	37.5%	0-89.6%
Trying home treatment	1	12.5%	0-41.7%
Was too far to travel	0	0	0
Do not trust or fear health workers	0	0	0
Fear of having a serious illness	0	0	0
Fear of stigma against TB or HIV	0	0	0
Too busy	0	0	0
Not aware of consequences	0	0	0
Other	2	25.0%	0-71.6%
Don't know	2	25.0%	0-71.6%
No response	0	0	0
Total	8		

14. Have you ever heard of the disease called TB?

	Frequency	Percent	95% CI
No	18	6.0%	2.8%-9.2%
Yes	280	93.3%	89.8%-96.9%
Don't know	2	0.7%	0-1.6%
Total	300		

15. What symptoms can show that a person has TB? (Based on those who had heard of TB)

	Yes			No		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
Coughing	187	66.8%	59.5%-74.1%	93	33.2%	25.9%-40.5%
Fever	19	6.8%	3.5%-10.1%	261	93.2%	89.9%-96.5%
Coughing with Sputum	47	16.8%	11.4%-22.1%	233	83.2%	77.9%-88.6%
Coughing for longer than 3 weeks	40	14.3%	9.4%-19.1%	240	85.7%	80.9%-90.6%
Cough with blood in sputum	28	10.0%	5.7%-14.3%	252	90.0%	85.7%-94.3%
Loss of appetite	9	3.2%	1.1%-5.4%	271	96.8%	94.7%-98.9%
Pain in the chest	39	13.9%	9.3%-18.6%	241	86.1%	81.4%-90.7%
Total weakness (inertia)	47	16.8%	11.2%-22.3%	233	83.2%	77.7%-88.8%

Weight loss	124	44.3%	35.9%-52.7%	156	55.7%	47.3%-64.1%
Swollen glands	14	5.0%	1.9%-8.1%	266	95.0%	91.9%-98.1%
Night Sweats	10	3.6%	1.2%-6.0%	270	96.4%	94.0%-98.8%
Other	24	8.6%	4.6%-12.5%	256	91.4%	84.5%-95.4%
Don't know	20	7.1%	4.0%-10.3%	260	92.9%	89.7%-96.0%
No response	0	0	0	280	100%	100%

15. What symptoms can show that a person has TB? (Based on all respondents)

	Yes			No		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
Coughing	187	62.3%	55.0%-69.7%	113	37.7%	30.3%-45.0%
Fever	19	6.3%	3.2%-9.5%	281	93.7%	90.5%-96.8%
Coughing with Sputum	47	15.7%	10.5%-20.8%	253	84.3%	79.2%-89.5%
Coughing for longer than 3 weeks	40	13.3%	8.9%-17.8%	260	86.7%	82.2%-91.1%
Cough with blood in sputum	28	9.3%	5.3%-13.4%	272	90.7%	86.6%-94.7%
Loss of appetite	9	3.0%	1.0%-5.0%	291	97.0%	95.0%-99.0%
Pain in the chest	39	13.0%	8.7%-17.3%	261	87.0%	82.7%-89.5%
Total weakness (inertia)	47	15.7%	10.5%-20.8%	253	84.3%	79.2%-89.5%
Weight loss	124	41.3%	33.0%-49.6%	176	58.7%	50.4%-67.0%
Swollen glands	14	4.7%	1.8%-7.6%	286	95.3%	92.4%-98.2%
Night Sweats	10	3.3%	1.1%-5.6%	290	96.7%	94.4%-98.9%
Other	24	8.0%	4.3%-11.7%	276	92.0%	88.3%-95.7%
Don't know	20	6.7%	3.7%-9.7%	280	93.3%	90.3%-96.3%
No response	0	0	0	300	100%	100%

Number of TB symptoms listed per respondent

	Yes			No		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
No symptoms	21	7.5%	4.2%-10.8%	259	92.5%	89.2%-95.8%
One symptom	57	20.4%	14.4%-26.3%	223	79.6%	73.7%-85.6%
Two symptoms	115	41.1%	35.7%-46.4%	165	58.9%	53.6%-64.3%
Two or more symptoms	202	72.1%	65.8%-78.4%	78	27.9%	21.6%-34.2%
Three symptoms	72	25.7%	20.3%-31.1%	208	74.3%	68.9%-79.7%
Four symptoms	14	5.0%	1.6%-8.4%	266	95.0%	91.6%-98.4%
Five symptoms	1	0.4%	0-1.1%	279	99.6%	98.9%-100%

Mean number of symptoms listed per respondent was 2.0 with a SE of 0.082; the minimum number of symptoms listed was 0 while the maximum number was 5.

16. How is TB transmitted? (More than one answer allowed) Of those who hear of TB:

	Yes			No		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
Through the air by coughing	62	22.1%	12.9%-31.4%	218	77.9%	68.6%-87.1%
Through blood	7	2.5%	0.7%-4.3%	273	97.5%	95.7%-99.3%
Though a handshake	0	0	0	280	100%	100
Sexually transmitted	40	14.3%	8.0%-20.5%	240	85.7%	79.5%-92.0%
Sharing food with infected person	32	11.4%	6.9%-16.0%	248	88.6%	84.0%-93.1%
You are born with it	1	0.4%	0-1.1%	279	99.6%	98.9%-100%
Through a kiss	4	1.4%	0-3.7%	276	98.6%	96.3%-100%
After getting a cold	0	0	0	280	100%	100
From mosquito bite	1	0.4%	0-1.1%	279	99.6%	98.9%-100%
Through the death of someone	112	40.0%	29.8%-50.2%	168	60.0%	49.8%-70.2%
Other	43	15.4%	8.8%-21.9%	237	84.6%	78.1%-91.2%
Don't know	67	23.9%	15.8%-32.1%	213	76.0%	67.9%-84.2%
No response	0	0	0	280	100%	100

16. How is TB transmitted? (More than one answer allowed) Of all survey respondents:

	Yes			No		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
Through the air by coughing	62	20.7%	12.0%-29.4%	238	79.3%	70.6%-88.0%
Through blood	7	2.3%	0.8%-3.9%	293	97.7%	96.1%-99.3%
Though a handshake	0	0	0	300	100%	100
Sexually transmitted	40	13.3%	7.6%-19.1%	260	86.7%	80.9%-92.4%
Sharing food with infected person	32	10.7%	6.4%-14.9%	268	89.3%	85.1%-93.6%
You are born with it	1	0.3%	0-1.0%	299	99.7%	99.0%-100%
Through a kiss	4	1.3%	0-3.5%	296	98.7%	96.5%-100%
After getting a cold	0	0	0	300	100%	100
From mosquito bite	1	0.3%	0-1.0%	299	99.7%	99.0%-100%
Through the death of someone	112	37.3%	27.6%-47.1%	188	62.7%	52.9%-72.4%
Other	43	14.3%	8.1%-20.6%	257	85.7%	79.4%-91.9%
Don't know	67	22.3%	14.9%-29.8%	233	77.7%	70.2%-85.1%
No response	0	0	0	300	100%	100

17. Have you received any information about TB in the last 6 months?

	Frequency	Percent	95% CI
No	173	61.8%	53.8%-69.8%
Yes	101	36.1%	28.0%-44.1%
Don't know	5	1.8%	0.3%-3.3%
No response	1	0.4%	0-1.1%
Total	280		

18. If yes, from which sources did you receive information?

	Yes			No		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
Friends, acquaintances, or relatives	46	45.5%	34.1%-57.0%	55	54.5%	43.0%-65.9%
Doctors or nurses	22	21.8%	11.5%-32.1%	79	78.2%	67.9%-88.5%

Other medical workers	16	15.8%	5.8%-25.9%	85	84.2%	74.1%-94.2%
Booklet, leaflets	0	0	0	101	100%	100%
Radios/ TV/ Newspapers	5	5.0%	0.3%-9.6%	96	95.0%	90.4%-99.7%
Volunteers	6	5.9%	0.7%-11.2%	95	94.1%	88.8%-99.3%
Health Department	6	5.9%	1.3%-10.6%	95	94.1%	89.4%-98.7%
Pastor	0	0	0	101	100%	100%
Other	2	2.0%	0-4.9%	99	98.0%	95.1%-100%
Don't know	1	1.0%	0-3.0%	100	99.0%	97.0%-100%
No response	0	0	0	101	100%	100%

#### Number of sources list per respondent

	Frequency	Percent	95% CI
0	2	2.0%	0-4.9%
1	96	95.0%	90.6%-99.5%
2	3	3.0%	0-6.4%
Total	101		

Mean number of sources listed was 1.0, SE= 0.02; Min=0; Max=2

#### 19. In your opinion, is TB curable? (Including all survey respondents)

	Frequency	Percent	95% CI
Yes	256	85.3%	80.0%-90.7%
No/ Other	44	14.7%	9.3%-20.0%
Total	300		

#### 19. In your opinion, is TB curable? (Of those who had heard of TB)

	Frequency	Percent	95% CI
No	11	3.9%	0.7%-7.2%
Yes	256	91.4%	87.0%-95.8%
Don't know	10	3.6%	1.0%-6.2%
No response	3	1.1%	0-2.7%
Total	280		

Those who believe that TB is curable and when asked if they had symptoms they responded that they would go to a HF (HC, Socorrista, or TB Hospital)

	Frequency	Percent	95% CI
Yes	232	82.9%	76.3%-89.4%
No	48	17.1%	10.6%-23.7%
Total	280		

Those who believe that TB is curable and when asked if they had symptoms responded that they would seek treatment source outside of the formal health care system and would did not list that they would go to a health facility.

	Frequency	Percent	95% CI
Yes	16	5.7%	1.6%-9.9%
No	264	94.3%	90.1%-98.4%
Total	280		

Those who believe that TB is curable and when asked if they had symptoms responded that they would go to both a HF and a healer outside of the health facility

	Frequency	Percent	95% CI
Yes	38	13.6%	7.3%-19.9%
No	242	86.4%	80.1%-92.7%
Total	280		

	TB Curable= Yes		TB Curable= No/ DK/NR	
Male	90	92.8%	7	7.2%
Female	166	90.7%	17	9.3%
Total	256	91.4%	24	8.6%

Odds Ratio (OR) 1.317; Standard Error (SE) 0.579; 95% Conf. Limits (0.54, 3.234 )

	TB Curable= Yes		TB Curable= No/ DK/NR	
Attended School=Yes	138	53.9%	14	58.3%
Attended School=No, DK or NR	118	46.1%	10	41.7%
Total	256		24	

Odds Ratio (OR) 0.835; Standard Error (SE) 0.308; 95% Conf. Limits (0.40, 1.764 )

20. Is TB medicine free of charge? (Including all survey respondents)

	Frequency	Percent	95% CI
Yes	119	39.7%	31.2%-48.1%
No/Other	181	60.3%	51.9%-68.8%
Total	300		

20. Is TB medicine free of charge? (Of those who had heard of TB)

	Frequency	Percent	95% CI
No	102	36.4%	28.9%-43.9%
Yes	119	42.5%	34.1%-50.9%
Don't know	59	21.1%	14.9%-27.2%
No response	0	0	0
Total	280		

21. If you had TB symptoms where would you go to get care?

	Yes			No		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
Health Center	219	78.2%	70.0%-86.4%	61	21.8%	13.6%-30.0%
Socorrista	6	2.1%	0-4.6%	274	97.9%	95.4%-100%
TB Hospital (Carmelo)	33	11.8%	5.1%-18.5%	247	88.2%	81.5%-94.9%
Traditional Doctor	54	19.3%	11.7%-26.8%	226	80.7%	73.2%-88.3%
Pharmacy	0	0%	0%	280	100%	100%
Spiritual Healer/ Prophet or Zionist	7	2.5%	0-5.2%	273	97.5%	94.8%-100%
Other	6	2.1%	0-4.8%	274	97.9%	95.2%-100%
Don't know	11	3.9%	0.9%-7.0%	269	96.1%	93.0%-99.1%
No response	0	0%	0%	280	100%	100%
Any HF (HC, Soc, or Hosp)	248	88.6%	83.2%-93.9%	32	11.4%	6.1%-16.8%
Other treatment options (Trad Doc, Spiritualist, Pharm)	59	21.1%	13.6%-28.6%	221	78.9%	71.4%-86.4%
Any HF and NOT any other type	210	75.0%	66.3%-83.7%	70	25.0%	16.3%-33.7%
Other treatment options and not any HF	21	7.5%	3.2%-11.8%	259	92.5%	88.2%-96.8%

22. How long would it take you to walk to (the nearest TB testing facility) from here?

	Frequency	Percent	95% CI
0-15 minutes	71	25.4%	14.2%-36.5%
16-30 minutes	28	10.0%	3.7%-16.3%
31 minutes to one hour	20	7.1%	2.7%-11.6%

More than one hour	117	41.8%	29.7%-53.9%
Don't know	43		
No Response	1	0.4%	0-1.1%
Total	280		

23. Have you or any of your household members been told by a health care worker that they have TB in the last year?

	Frequency	Percent	95% CI
No	260	88.7%	82.4%-91.0%
Yes	34	11.3%	7.0%-15.7%
Don't know	6	2.0%	0.2%-3.8%
Total	300		

24. If yes, what test did health center workers do to find that you or your household member was diagnosed with TB?

	Frequency	Percent	95% CI
Sputum test	27	79.4%	62.8%-96.1%
X-ray	2	5.9%	0-14.6%
Other	1	2.9%	0-14.6%
Don't know	4	11.8%	0-25.8%
No response	0	0%	0%
Total	34		

25. How long did it take before you or your household member got the test results?

	Frequency	Percent	95% CI
Same day	16	47.1%	33.7%-60.4%
Less than one week	8	23.5%	9.5%-37.5%
About one week	5	14.7%	4.6%-24.8%
2-3 weeks	0	0%	0%
A month or more	0	0%	0%
Other	1	2.9%	0-9.3%
Don't know	4	11.8%	0-23.8%
No response	0	0%	0%
Total	34		

26. Did you or your household member pay anything to find out you had TB?

	Frequency	Percent	95% CI
No	30	88.2%	73.5%-100%
Yes	2	5.9%	0-14.6%
Don't know	2	5.9%	0-14.4%
Total	34		

27. Did you or your household member receive medication to treat TB?

	Frequency	Percent	95% CI
Yes	28	82.4%	68.9%-95.8%
No	5	14.7%	2.5%-26.9%
Don't know	1	2.9%	0-9.3%
Total	34		

28. If no, why did you or your household member not receive drugs?

	Frequency	Percent	95% CI
Drugs not available	2	40%	0-100%
No	5	14.7%	2.5%-26.9%
Don't know	1	2.9%	0-9.3%
Total	34		

29. If yes to #27, did you or your household member pay anything for the TB medication?

	Frequency	Percent	95% CI
No	22	78.6%	58.1%-99.1%
Yes	4	14.3%	0-28.9%
Don't know	2	7.1%	0-17.8%
Total	28		

30. Did anyone watch you or your household member take the medication daily?

	Frequency	Percent	95% CI
No	16	57.1%	9.0%-38.2%
Yes	12	42.9%	23.9%-61.8%
Total	28		

31. If yes, who watched you or your household member take the medication?

	Frequency	Percent	95% CI
Health clinic worker	2	16.7%	0-37.6%
Socorrista	1	8.3%	0-27.6%
Padrinho	1	8.3%	0-27.6%
Family or friend	7	58.3%	30.6%-86.0%
Don't know	1	8.3%	0-27.6%
No response	0	0	0
Total	12		

32. Did you or your household member complete the course of medication as explained by the health worker?

	Frequency	Percent	95% CI
No	1	3.6%	0-11.1%
Yes	23	82.1%	65.1%-99.2%

Still taking medication	3	10.7%	0-24.3%
Don't know	1	3.6%	0-11.4%
Total	28		

33. Why did you or your household member stop taking the TB medicine?

	Frequency	Percent	95% CI
Feel better	0	0	0
Don't have money	1	100%	100%
Drug side effects	0	0	0
TB drugs are not available	0	0	0
Health facility is too far	0	0	0
Moved to a different place	0	0	0
Don't believe it is necessary	0	0	0
Difficult to swallow so many pills	0	0	0
Other	0	0	0
Don't know	0	0	0
No response	0	0	0
Total	1		

34. If course completed, what was the outcome of the treatment?

	Frequency	Percent	95% CI
Cured	16	69.6%	45.7%-93.5%
Not cured	0	0	0
Haven't finished treatment	6	26.1%	3.1%-49.1%
Died	1	4.3%	0-13.7%
Don't know	0	0	0
No response	0	0	0
Total	23		

35. What can you do to decrease the risk of getting of TB?

	Yes			No		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
Wear a mask when contacting patients with TB	21	7.0%	2.4%-11.6%	279	93.0%	88.4%-97.6%
Provide good ventilation for workplace and home	4	1.3%	0-2.6%	296	98.7%	97.4%-100%
Annual medical examination	77	25.7%	16.9%-34.2%	223	74.3%	65.6%-83.1%
Prevent HIV	2	0.7%	0-1.6%	298	99.3%	98.4%-100%
Good nutrition	4	1.3%	0-2.6%	296	98.7%	97.4%-100%

Other	86	28.7%	22.3%-35.0%	214	71.3%	65.0%-77.7%
Don't know	119	39.7%	31.7%-47.7%	181	60.3%	52.3%-68.3%
No response	1	0.3%	0-1/0%	299	99.7%	99.0%-100%

#### Number of ways to decrease risk of TB listed by respondents

	Frequency	Percent	95% CI
0	202	67.3%	57.3%-77.3%
1	87	29.0%	20.1%-37.8%
2	10	3.3%	0.9%-5.8%
3	1	0.3%	0-1.0%
Total	300		

Mean= 0.37; SE= 0.05; CI= 0.248-0.485; Min=0; Max=3

#### 36. What can people with TB do to decrease the risk of transmitting TB?

	Yes			No		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
Adhere to treatment	97	32.3%	3.8%-24.5%	203	67.7%	59.8%-75.5%
Seek medical care if have symptoms	31	10.3%	5.5%-15.2%	269	89.7%	84.8%-94.5%
Cover mouth when coughing	39	13.0%	7.1%-18.9%	261	87.0%	81.1%-92.9%
Have good ventilation in home	2	0.7%	0-1.6%	298	99.3%	98.4%-100%
Not spit in public places	44	14.7%	8.3%-21.7%	256	85.3%	78.9%-91.7%
Avoid delay in TB treatment	21	7.0%	4.0%-10.0%	279	93.0%	90.0%-96.0%
Other	60	20.0%	13.7%-26.4%	240	80.0%	73.6%-86.4%
Don't know	82	27.3%	20.1%-34.6%	218	72.7%	65.4%-79.9%
No response	2	0.7%	0-1.6%	298	99.3%	98.4%-100%

Number of ways to decrease risk of spreading TB

	Frequency	Percent	95% CI
0	130	43.3%	33.9%-52.8%
1	122	40.7%	33.7%-47.7%
2	31	10.3%	5.1%-15.6%
3	17	5.7%	1.8%-1.9%
Total	300		

Mean= 0.783; SE=0.090; CI= 0.6-0.967; Min=0; Max=3

37. Have you ever had a friend, neighbor, workmate, or schoolmate with TB?

	Frequency	Percent	95% CI
Yes	75	25.0%	18.8%-31.2%
No	223	74.3%	68.2%-80.5%
Don't know	2	0.7%	0-1.6%
No response	0	0%	0%
Total	300		

38. Would you visit someone with TB in their home?

	Frequency	Percent	95% CI
No	18	6.0%	1.9%-10.1%
Yes	271	90.3%	85.0%-95.7%
Don't know	11	3.7%	1.2%-6.2%
No response	0	0%	0%
Total	300		

39. If no, why would you visit someone with TB in their home?

	Frequency	Percent	95% CI
Fear of disease	14	77.8%	50.3%-100%
Other	4	22.2%	0-49.7%
Don't know	0	0	0
No response	0	0	0
Total	18		

40. If someone has TB, would they try to hide the disease from others?

	Frequency	Percent	95% CI
No	204	68.0%	59.0%-77.0%
Yes	82	27.3%	18.6%-36.0%
Don't know	14	4.7%	2.1%-7.2%
No response	0	0	0
Total	300		

41. If yes, why would people with TB try to hide the disease from others?

	Yes			No		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
Because they will lose job	1	1.2%	0-3.8%	81	98.8%	96.2%-100%
Because they will lose friends	17	20.7%	9.2%-32.3%	65	79.3%	67.7%-90.8%
Because people will avoid them	13	15.9%	5.6%-26.1%	69	84.1%	73.9%-94.4%
Because no one will marry them	2	2.4%	0-6.1%	80	97.6%	93.9%-100%
Because people will think they have HIV	41	50.0%	33.3%-66.7%	41	50.0%	33.3%-66.7%
Other	16	19.5%	7.2%-31.8%	66	80.5%	68.2%-92.8%
Don't know	13	15.9%	6.9%-24.8%	69	84.1%	75.2%-93.1%
No response	0	0	0	82	100%	100

42. Do you think it is shameful to have TB?

	Frequency	Percent	95% CI
No	205	68.3%	62.5%-74.1%
Yes	87	29.0%	23.4%-34.6%
Don't know	8	2.7%	0-5.4%
No response	0	0	0
Total	300		

43. If yes, why do you think it is shameful to have TB?

	Yes			No		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
This is a disease of unfaithful people	27	31.0%	19.3%-42.8%	60	69.0%	57.2%-80.7%
Because the person with TB can lose their job	2	1.6%	0-5.5%	85	97.7%	94.5%-100%
Because everybody will avoid the person with TB	15	17.2%	8.4%-26.0%	72	82.8%	74.0%-91.6%
Because it means the person is or may be HIV+	31	35.6%	24.4%-46.9%	56	64.4%	53.1%-75.6%
Improper cleansing after death	44	50.6%	37.4%-63.7%	43	49.4%	36.3%-62.6%
Other	11	12.6%	3.0%-22.3%	76	87.4%	77.7%-97.0%
Don't know	2	2.3%	0-7.0%	85	97.7%	93.0%-

						100%
No response	2	2.3%	0-5.4%	85	97.7%	94.6%-100%

44. Have you heard about the disease called HIV or AIDS?

	Frequency	Percent	95% CI
No	3	1.0%	0-2.5%
Yes	297	99.0%	97.5%-100%
Total	300		

45. If yes, how can you protect yourself from getting HIV?

	Yes			No		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
Abstinence	60	20.2%	12.7%-27.7%	237	79.8%	72.3%-87.3%
Faithfulness	133	44.8%	36.6%-53.0%	164	55.2%	47.0%-63.4%
Condom use	202	68.0%	60.3%-75.7%	95	32.0%	24.3%-39.7%
Avoid skin piercing objects	28	9.4%	5.2%-13.6%	269	90.6%	86.4%-94.8%
Prompt STI treatment	10	3.4%	1.1%-5.6%	287	96.6%	94.4%-98.9%
Being attended to be a trained service provider during pregnancy and delivery	2	0.5%	0-1.6%	295	99.3%	98.4%-100%
Infant feeding options	0	0	0	297	100%	100%
Use of ART	5	1.7%	0.3%-3.1%	292	98.3%	97.0%-99.7%
Other	5	1.7%	0.2%-3.1%	292	98.3%	96.9%-99.8%
Don't know	35	11.8%	7.3%-16.2%	262	88.2%	83.8%-92.6%
No response	0	0	0	297	100%	100%

Number of ways to prevent HIV listed per respondent

	Frequency	Percent	95% CI
0	38	12.8%	8.1%-17.4%
1	107	36.0%	28.5%-43.5%
2	124	41.8%	34.6%-48.9%
3	26	8.8%	4.6%-12.9%
4	2	0.7%	0-1.6%

Total	297		
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Mean= 1.485; SE=0.076; CI= 1.329-1.640; Min=0; Max=4

#### 46. How is HIV transmitted?

	Yes			No		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
Through the air when coughing	2	0.7%	0-1.6%	295	99.3%	98.4%-100%
Through a handshake	3	1.0%	0-2.2%	294	99.0%	97.8%-100%
Sexually transmitted	271	91.2%	87.9%-94.6%	26	8.8%	5.4%-12.1%
Sharing food with infected person	2	0.7%	0-1.6%	295	99.3%	98.4%-100%
Through blood transfusion	30	10.1%	5.7%-14.5%	267	89.9%	85.5%-94.3%
Through kiss	2	0.7%	0-1.6%	295	99.3%	98.4%-100%
Sharing needles/razors	167	56.2%	45.2%-67.3%	130	43.8%	32.7%-54.8%
From mother to child during pregnancy	5	1.7%	0.3%-3.1%	292	98.3%	96.9%-99.7%
Breastfeeding	1	0.3%	0-1.0%	296	99.6%	99.0%-100%
Witchcraft	0	0	0	297	100%	100%
Other	9	3.0%	1.0%-5.0%	288	97.0%	95.0%-99.0%
Don't know	13	4.4%	2.2%-6.5%	284	95.6%	93.5%-97.8%
No response	0	0	0	297	100%	100%

#### Number of correct ways HIV is transmitted listed per respondent

	Frequency	Percent	95% CI
0	18	6.1%	3.5%-8.6%
1	107	36.0%	25.8%-46.3%
2	145	48.8%	39.5%-58.1%
3	26	8.8%	5.0%-12.5%
5	1	0.3%	0-1.0%
Total	297		

Mean=1.6; SE=0.068; CI= 1.476-1.756; Min=0; Max=5

47. Do you know where you can get tested for HIV?

	Frequency	Percent	95% CI
No	17	5.7%	3.4%-8.1%
Yes	268	90.2%	86.1%-94.4%
Don't know	12	4.0%	1.1%-6.9%
Total	297		

48. If yes, how long would it take you to walk to the nearest HIV testing center from here?

	Frequency	Percent	95% CI
0-15 minutes	80	29.9%	17.5%-42.2%
16-30 minutes	22	8.2%	2.4%-14.0%
31 min – 1 hour	21	7.8%	3.0%-12.7%
More than 1 hour	116	43.3%	31.0%-55.5%
Don't know	28	10.4%	5.4%-15.5%
No response	1	0.4%	0-1.1%
Total	268		

49. I don't want to know the result, but have you ever had an HIV test?

	Frequency	Percent	95% CI
No	158	53.2%	46.0%-60.4%
Yes	138	46.5%	39.2%-53.8%
Don't know	1	0.3%	0-1.0%
No response	0	0	0
Total	297		

	Yes, have had an HIV test			Have not had an HIV test		
	Frequency	Percent	95% CI	Frequency	Percent	95% CI
Male	36	35.6%	17.9%-34.3%	65	64.4%	33.4%-46.8%
Female	102	51.3%	65.7%-82.1%	97	48.7%	53.2%-66.6%

Odds ratio= 0.527 (0.32-0.862)

50. Do you think that someone with HIV should be tested for TB?

	Frequency	Percent	95% CI
No	76	25.6%	16.9%-34.3%
Yes	169	56.9%	45.4%-68.4%
Don't know	52	17.5%	12.1%-22.9%
No response	0	0	0
Total	297		

51. Do you think that someone with TB should be tested for HIV?

	Frequency	Percent	95% CI
No	77	25.9%	18.2%-33.7%
Yes	176	59.3%	48.5%-70.0%
Don't know	43	14.5%	9.4%-19.6%
No response	1	0.3%	0-1.0%
Total	297	100.0%	

52. Are you more likely to get TB if you have HIV?

	Frequency	Percent	95% CI
No	68	22.9%	15.2%-30.6%
Yes	185	62.3%	53.1%-71.5%
Don't know	44	14.8%	9.2%-20.4%
No response	0	0	0
Total	297		

## Annex D: Sampling Framework

	Village Population size		Cluster Number 6406	Random Number 5351
	Population	Accumulated	Cluster identification	Group/cluster number
<b>Chicualacuala</b>				
Chicualacuala-Sede	5,556	5,556	5351	1
Chassanga	474	6,030		
Mugugugo	342	6,372		
3 de Fevereiro	486	6,858		
Mahatlane	762	7,620		
Chitlavanine	264	7,884		
Malongueta	432	8,316		
Malambane	276	8,592		
Muzila	432	9,024		
Chale	384	9,408		
Mapai-sede	6,888	16,296	11757	2
Regua	492	16,788		
Litlatla	1,530	18,318	18163	3
Hoxa-ribye	618	18,936		
Chicualac. "B"	390	19,326		
Madulo	312	19,638		
Chidulo	840	20,478		
Ligome	570	21,048		
Mepuzi	894	21,942		
Mukhatxuane	684	22,626		
Chilemane	606	23,232		
Vuyela	480	23,712		
Nghala	438	24,150		
Muzamane	348	24,498		
Chissapa	360	24,858	24569	4
Maphuvule	420	25,278		
Ndombe	468	25,746		
Mafassitela	564	26,310		
<b>Chigubo</b>				
Ndindiza	1,470	27,780		
Nongote	828	28,608		
Keke	1,506	30,114		
Nhanale	1,440	31,554	30975	5
Nhamazane	1,644	33,198		
Cubo	1,362	34,560		
Chipimbe	822	35,382		
Zinhane	1,050	36,432		
Machaila	1,170	37,602	37381	6
Mapungane	942	38,544		
Hariane	378	38,922		
Hokwane	588	39,510		
Hlecane	540	40,050		

<b>Guija</b>		40,050		
Guija-Sede	5246	45,296	43787	7
Songuene	214	45,510		
Sifo	8339	53,849	50193	8
Acordo de Luzaka	15750	69,599	56599 + 63005 +69411	9, 10, 11
Chibabel	14200	83,799	75817 + 82223	12, 13
Chichongolo	1382	85,181		
Mbala-Vala	647	85,828		
Gumbane	1384	87,212		
Maimane	652	87,864		
Nalaze	1554	89,418	88629	14
Pandzane	656	90,074		
Chimbembe	2068	92,142		
Dzindzine	977	93,119		
Pumbe	880	93,999		
Pelane	3848	97,847	95035	15
Ndonga	7780	105,627	101441	16
Chinhacanine	6689	112,316	107847	17
Mubanguene	5836	118,152	114253	18
Nhatine	1807	119,959		
Tomanine	874	120,833	120659	19
7 Abril	2997	123,830		
Chivonguene	1048	124,878		
<b>Massingir</b>				
Tihovene	4956	129,834	127065	20
Canhane	1176	131,010		
Cubo	1536	132,546		
Mahlaule	468	133,014		
Makhavene	582	133,596	133471	21
Chibotane	1248	134,844		
Madingane	636	135,480		
Chinhangane	1194	136,674		
Marrenguele	300	136,974		
Banga	948	137,922		
Chitar	582	138,504		
Zulo	588	139,092		
Macaringue	2382	141,474	139877	22
Tchaque	1428	142,902		
Timhondzweni	582	143,484		
Mucatine	1770	145,254		
Nheleti	600	145,854		
Decad da Vitoria	486	146,340	146283	23
Ringane	186	146,526		
Makwaxane	576	147,102		
Nkuzi	672	147,774		
Munhamane	618	148,392		

Chipandzo	216	148,608		
Makhongele	684	149,292		
Manhica	618	149,910		
<b>Massangena</b>				
Bocoda	6114	156,024	152689	24
Mabondzo	2136	158,160		
Chicumbo	900	159,060		
Cufamune	1716	160,776	159095	25
Chizumbane	570	161,346		
Chigamane	336	161,682		
Mucambene	2004	163,686		
Nhamadgio	306	163,992		
Siqueto	678	164,670		
Matchave	444	165,114		
Mutcheli	276	165,390		
Socote	570	165,960	165501	26
Mavue	1284	167,244		
Chimbandze	384	167,628		
Matambuje	312	167,940		
Muzamane	900	168,840		
Mapanhe	726	169,566		
<b>Mabalane</b>				
Pfukwe	3,081	172,647	171907	27
Covela	380	173,027		
Tsocate	1,255	174,282		
Chinhequete	1,331	175,613		
Machava	519	176,132		
Munginge	1,002	177,134		
Mabalane-Sede	3,803	180,937	178313	28
Matidze	877	181,814		
Chipswane	862	182,676		
Mabomo	1,046	183,722		
Hoyo-Hoyo	1,860	185,582	184719	29
Combomune-Estacao	4,006	189,588		
Combomune-Rio	860	190,448		
Nhone	287	190,735		
Macaral	400	191,135	191125	30
Jasse	388	191,523		
Gerez	655	192,178		
÷ 30 =		6,406		

## **Annex E: Survey Team**

### **ORGANIZERS:**

PIETER ERNST  
Director, Program Integration

INACIO CHITLANGO  
Monitoring and Evaluation Manager, *Vurhonga* CB-DOTS

SARAH BORGER  
MCH Specialist, World Relief Headquarters

### **INTERVIEWERS:**

CELINA CHONGO  
CLARA JAVANA  
DELFINA MALULEGUE  
MARIA LOUISA  
MARIA MARCELA  
MELITA MAPSANGANHE  
ODETE NHANGUMBE  
RUTE CHAQUE  
RUTE CHONGO  
ALFREDO JORDÃO MACUACUA  
ANA BELA COSSA  
CARLITA AMÉRICO COSSA  
ELDA EUGENIO MUNGUAMBE  
FILOMENA JOSE MACUACUA  
JOANA ANTÓNIO CHAÚQUE  
JOBIA BENJAMIM CHONGO  
MILOCA EUGENIO MUNGUAMBE  
PAULA ISABEL PAULO CHAUQUE

## Annex F: Training Schedule and Project Resources Required

### ***Training Schedule***

December 1-4, 2009	External interviewer recruitment
December 7, 2009	Introduction and background of project to interviewers Importance of an evaluation Responsibilities of an interviewer Responsibilities of a supervisor
December 8, 2009	Explanation of KPC questionnaire, question by question Practice reading the questionnaire
December 9, 2009	Division in 10 teams for field testing
December 10-14, 2009	Conduct survey
December 15-17, 2009	Manual tabulation of survey results

### ***Project Resources Required***

Expense	Approximate cost (USD)
Salaries (Staff and external interviewers)	\$3,300
Administrative costs (including photocopies)	\$500
Transportation/ gasoline	\$1,400
Meals and Lodging	\$200
<b>Total</b>	<b>\$5,400</b>

## Annex 9: Child Survival and Health Grants Program Data Form

### *Child Survival and Health Grants Program Project Summary*

Aug-12-2010

*World Relief Corporation  
(Mozambique)*

#### General Project Information

**Cooperative Agreement Number:** GHN-A-00-09-00017  
**WRC Headquarters Technical Backstop:** Debbie Dortzbach  
**WRC Headquarters Technical Backstop Backup:** Sarah Borger  
**Field Program Manager:**  
**Midterm Evaluator:**  
**Final Evaluator:**  
**Headquarter Financial Contact:** Sarah Borger  
**Project Dates:** 9/30/2009 - 9/29/2014 (FY09)  
**Project Type:** TB Control  
**USAID Mission Contact:** Jeri Dible  
**Project Web Site:**

#### Field Program Manager

**Name:**  
**Address:**  
  
**Phone:**  
**Fax:**  
**E-mail:**  
**Skype Name:**

#### Alternate Field Contact

**Name:** Pieter Ernst  
**Address:** RUA DOM JOAO III, No. 90, Summershield  
RUA DOM JOAO III, No. 90, Summershield  
Maputo Mozambique  
**Phone:** +258-82-316-4220  
**Fax:**  
**E-mail:** pernst@wr.org  
**Skype Name:**

[Grant Funding Information](#)

**USAID Funding:** \$1,500,000

**PVO Match:** \$500,000

[General Project Description](#)

Working in Gaza Province, World Relief's project **goal** is to reduce the TB burden per the National Strategic Plan and STOP TB Strategy, with the **objectives** to increase the case notification rate by 50% and to reach an 85% treatment success rate for CB-DOTS.

Project **strategies** and **activities** are to:

Empower people with TB to seek and complete treatment, with the support of communities. To achieve this, the project is conducting Advocacy, Communication and Social Mobilization (ACSM) via Care Groups (CG); increasing case detection via CG volunteers; and improving treatment compliance through the use of community treatment observers.

Strengthen National Tuberculosis Program (NTP) Systems to improve service delivery and patients' outcomes. To achieve this, the project is increasing the percent of facilities with adapted District Rapid Assessment Tools; improving diagnostic quality and access by training district lab technicians; improving referral from communities and counter-referral from health facilities; and collaborating with TB-Control Assistance Program and other NTP partners to implement the National Strategic Plan for TB Control

Decrease the burden of HIV in people with TB and decrease the burden of TB among people living with HIV/AIDS (PLWHA). To achieve this, the project is increasing HIV and TB education using ACSM; conducting intensified TB case finding among PLWHA using home base care activists (HBCA); improving routine HIV and TB testing; tracking CPT coverage for HIV/TB patients; and training HBCA in CB-DOT for use with their HIV/TB clients to improve treatment success.

[Project Location](#)

**Latitude:** -18.57

**Longitude:** 34.67

**Project Location Types:**

Rural Urban  
Peri-urban

**Levels of Intervention:**

District Hospital  
Health Center  
Health Post Level  
Home  
Community  
Other: Provincial NTP

**Province(s):**

Gaza Province

**District(s):**

Bilene (Macia Town only), Chigubo, Chokwe (Chokwe Town only), Chicualacuala, Guija, Mabalane, Massangena and Massingir

**Sub-District(s):**

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### Operations Research Information

There is no Operations Research (OR) component for this Project.

### Partners

<b>Mozambique Ministry of Health (NTP at Province, District and Local levels)</b> (Collaborating Partner)	\$0
<b>Carmelo Hospital</b> (Collaborating Partner)	\$0
<b>Various local community-based organizations including Village Health Committees, Pastors' Networks and churches</b> (Collaborating Partner)	\$0
<b>Family Health International (TB-CAP)</b> (Collaborating Partner)	\$0

### Strategies

<b>Social and Behavioral Change Strategies:</b>	Community Mobilization Group interventions Interpersonal Communication Mass media and small media
<b>Health Services Access Strategies:</b>	Addressing social barriers (i.e. gender, socio-cultural, etc) Implementation in a geographic area that the government has identified as poor and underserved
<b>Health Systems Strengthening:</b>	Conducting capacity assessment of local partners Supportive Supervision Developing/Helping to develop job aids Providing feedback on health worker performance Referral-counterreferral system development for CHWs Community role in supervision of CHWs Community role in recruitment of CHWs Review of clinical records (for quality assessment/feedback) Coordinating existing HMIS with community level data Community input on quality improvement
<b>Strategies for Enabling Environment:</b>	Stakeholder engagement and policy dialogue (local/state or national) Advocacy for policy change or resource mobilization Building capacity of communities/CBOs to advocate to leaders for health
<b>Tools/Methodologies:</b>	Community-based Monitoring of Vital Events TB Cohort Analysis (if applicable)

### Capacity Building

<b>Local Partners:</b>	Traditional Healers Dist. Health System Health Facility Staff
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Health CBOs  
 Other CBOs  
 Government sanctioned CHWs  
 Non-government sanctioned CHWs  
 Faith-Based Organizations (FBOs)

Interventions & Components

**Tuberculosis (100%)**

- Microscopy
- Monitoring/Supervision Surveillance
- Community IEC
- Community based care/DOT

IMCI Integration

CHW Training  
 HF Training

Operational Plan Indicators

**Number of People Trained in DOTS (TB Projects Only)**

There is no data for this project for this operational plan indicator.

Locations & Sub-Areas

**Total Population:**

306,188

Target Beneficiaries

**Mozambique - WRC - FY09**

**Number of Suspected TB Cases**

2,850

**Beneficiaries Total**

2,850

Rapid Catch Indicators: DIP Submission

<b>Sample Type: 30 Cluster</b>				
<b>Indicator</b>	<b>Numerator</b>	<b>Denominator</b>	<b>Percentage</b>	<b>Confidence Interval</b>
Percentage of new smear positive cases who were successfully treated	<b>44</b>	<b>56</b>	<b>78.6%</b>	<b>25.6</b>

Rapid Catch Indicators: Mid-term

Rapid Catch Indicators: Final Evaluation

Rapid Catch Indicator Comments

Please note that the TB Treatment Success Rate was measured using a modified District Rapid Assessment Tool for TB applied to all rural health centers in the project area. It was not based on a sample, 30-cluster or otherwise. Thus the automatic calculation for the confidence interval is irrelevant.

**World Relief Mozambique  
Vurhonga Community Based DOTS Project  
Baseline Health Facility Assessment**



**August 13, 2010**

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## ACRONYMS

ACSM	Advocacy Communication and Social Mobilization
APE	Agentes Polivalentes Elementares, Village level Community Health Workers
ART	Antiretroviral Therapy
CB-DOTS	Community Based- Directly Observed Therapy (originally Directly Observed TheraShort-course, although current DOTS strategy is much broader now than these two concepts)
CG	Care Group
CGV	Care Group Volunteer
C-HIS	Community Health Information System
CNR	Case Notification Rate
CPT	Co-trimoxazole Preventive Therapy
DOT	Directly Observed Therapy/Direct Observation of Treatment or Therapy
DOTS	Directly Observed Treatment- Short Course (Internationally recommended strategy for TB control consisting of 5 components)
DRAT	District Rapid Assessment Tool
DST	Drug sensitivity testing
EOP	End of project
HBCA	Home Based Care Activists
HC	Health Center
HIV	Human Immunodeficiency Virus
HIV+	Patients who test positive for HIV
HFA	Health Facility Assessment
HP	Health Post
IEC	Information, Education and Communication
MCDI	Medical Care Development International
MCH	Maternal and Child Health
M-DRAT	Modified District Rapid Assessment Tool
MDR-TB	Multi Drug Resistant Tuberculosis (resistance to at least rifampin and isoniazid)
NTP	National Tuberculosis Program
OVC	Orphans and Vulnerable Children
PLWHA	People Living With HIV/AIDS
PN	Pastors' Network
SS+	Sputum Smear positive
SS-	Sputum Smear Negative
TB	Tuberculosis
TB+	Patients who test positive for tuberculosis
TB-CAP	Tuberculosis Control Assistance Program
VHC	Village Health Committees
WHO	World Health Organization
WR	World Relief

## TABLE OF CONTENTS

A.	Executive Summary .....	1
B.	Background.....	1
	Location and population .....	1
	Overview of general health status of population .....	2
	The Tuberculosis (TB) Burden in Mozambique .....	2
	Structure of National TB Program .....	2
	Overview of the Mozambique TB control strategy .....	2
	The TB burden in Gaza .....	3
	Existing diagnostic TB treatment services in Gaza.....	3
	Project Goal and Objectives.....	3
C.	Process and Partnership Building .....	5
D.	Methods .....	5
	Project Indicators analyzed in this survey .....	6
	Sampling Design .....	7
	Data Collection and Analysis.....	7
E.	Results.....	8
	Project Indicators captured by the KPC.....	8
F.	DISCUSSION.....	9
	Staffing .....	9
	Registered TB Patients .....	9
	Suspecting TB .....	9
	Sputum Turnaround Time .....	9
	Smear Conversion Rate .....	10
	Treatment Outcome .....	10
	MDR TB .....	10
	Recording and Reporting .....	10
	TB/HIV Integration.....	10
	External Quality Assurance Testing .....	11
	IEC Materials.....	11
	Drug Management.....	11
	Testing Supplies.....	12
	Supervisory Visits.....	12
	External Comparisons .....	12

## ANNEXES

Annex 1: Baseline M-DRAT Questionnaire, A1

Annex 2: Raw Data Tables, A8

## **A. EXECUTIVE SUMMARY**

In early 2010, the World Relief (WR) Vurhonga TB program conducted a Baseline Health Facility Assessment (HFA) in the eight health centers (HC) in the project area with the capability to diagnose and treat Tuberculosis (TB). The project area's rural HCs include Chicualacuala, Mabalane, Massingir, Chibuto and Massangena; additionally, there is one semi-urban HC in Guija, 1 urban hospital in the town of Macia and an HIV/TB specialty hospital in Chokwe Town. The tool used was based on a modified version of the District Rapid Assessment Tool (DRAT) originally developed by Medical Care Development International (MCDI), referred to here as the Modified DRAT or M-DRAT. Said tool was designed to measure indicators surrounding TB referral, diagnosis and treatment. All qualifying HCs were included in the assessment and every current TB patient was counted. World Relief plans to use the M-DRAT tool for subsequent health facility assessments, including those prior to the midterm and final evaluations of the Vurhonga CB-DOTS Project.

Objectives and indicators measured in the HFA, with targets, include:

- Increase the quarterly case notification rate (CNR) by 50% from 110 to 165
- Maintain the high percentage of TB suspects examined by sputum microscopy at 80%
- Increase the percentage of referrals made by volunteers (measured at the HC) from 20.6% to 60%
- Conduct cohort analysis of treatment outcomes for Sputum Smear positive (SS+) patients including:
  - Increase the rate of treatment success from 71.4% to 85%
  - Maintain the high level of sputum smear conversion at 90%
- Eighty-five percent of SS- TB patients will complete the full treatment course
- Increase the percentage of patients on Community Based- Directly Observed Therapy (CB-DOT) from 26.4% to 60%
- Bring the proportion of TB suspects with SS+ confirmation in line with international standards by lowering it from 44.6% to between 10% and 25%
- Maintain the low proportion of major errors (reporting a positive sample negative or visa-versa) at less than 1%
- Less than 10% of HFs will report sputum bottle stock-outs in the previous quarter
- Less than 5% of HCs will report drug stock-outs of essential TB drugs in the previous quarter
- Less than 2% of those who start treatment will drop out (Interruption rate)
- 85% of Health Posts (HP) will be supervised by the District TB Supervisor during the previous quarter as reported in the Modified-District Rapid Assessment Tool (M-DRAT)
- Improve the percentage of HIV+ patients screened for TB from 46.6% to 60%
- Maintain high levels of HIV testing among TB patients at 95%
- Maintain high levels of Co-trimoxazole Preventive Therapy (CPT) in HIV/TB patients at 95%
- Less than 25% of HCs will report stock-outs of Cotrimoxazole in the previous quarter

Additional project objectives measured by repeat HFAs using the M-DRAT include:

- Conduct quarterly assessments of all health centers in the project area
- Conduct 100% of health center assessments with participation from the District TB Supervisors or designated representative

## **B. BACKGROUND**

### *Location and population*

Mozambique is a coastal country in southern Africa with an estimated population in 2007 of 20 million, and 1.2 million in the southern province of Gaza.<sup>1</sup> The project area includes the rural districts of Chicualacuala, Chigubo, Massangena, Massingir, Guija and Mabalane with a total population of 210,915 and 42,000 households<sup>2</sup>. In addition, the project will work with HIV+ individuals and their families in three urban or semi-urban sites: Macia in Bilene District, Chokwe Town in Chokwe District and Guija Town in Guija District with an additional population of 87,997<sup>3</sup>.

#### *Overview of general health status of population*

The World Bank's Human Development indicators rank Mozambique 175 out of 179 countries with a life expectancy of 42.4 years.<sup>4</sup> In 2006, 35% of the population was urban, the median age was 18 years, the fertility rate was 5.2<sup>5</sup> and the infant mortality rate was 124/1,000.<sup>6</sup> Less than 40% of the population has access to clean drinking water, which increases rates of cholera and diarrhea.<sup>7</sup> Mozambique is mostly agrarian and vulnerable to disasters. Farming is the main source of income for 42.2% of urban households and 73% of rural households; 96.6% of rural households are headed by women.<sup>8</sup>

#### *The Tuberculosis Burden in Mozambique*

The World Health Organization (WHO) ranks Mozambique 13<sup>th</sup> highest in prevalence of TB and 7<sup>th</sup> in TB mortality<sup>9</sup> in the world. Among the 22 countries that comprise over 80% of all TB cases, Mozambique has the sixth lowest case detection rate<sup>10</sup>. Despite significant government resources to fight TB, the HIV crisis undermines much progress. The prevalence of all TB cases in Mozambique is 624/100,000. Among the infectious sputum smear positive (SS+) cases, the incidence was 186/100,000 in 2006<sup>11</sup> and the estimated prevalence rate in 2004 was 250/100,000.<sup>12</sup> While Directly Observed Treatment- Short Course (DOTS) is available in every province, the coverage rate varies greatly. Overall, DOTS coverage is 70.9%, however coverage in Gaza is only 54.1%, which is the third lowest in Mozambique.<sup>13</sup> Based on a 2005 cohort, the DOTS treatment success rate was 70% for all cases, and 79% for new cases.<sup>14</sup> Nationally, the DOTS case detection rate is 47%, with a treatment success rate of 70% for both new and returning SS+ cases.<sup>15</sup> A national survey in 1999 stated a (Multi-Drug Resistant Tuberculosis) MDR-TB rate of 3.4%.<sup>16</sup>

#### *Structure of National TB Program*

Mozambique's National Tuberculosis Control Program (NTP) was established in 1977. The NTP is under the Director of Public Health, currently Dr. Mouzinho Saide, and is headed by the Program Chief. Seven national professional staff oversee the program: a public health physician, a general physician for MDR-TB and infection control in high risk groups, a physician for preventative medicine, a national supervisor to manage data and medicine, a medical technician who assists in the area of TB/HIV, a logistician, and an infection control nurse.<sup>17</sup> The National Program Chief oversees 11 Provincial offices; each Province has one Director, an Infectious Disease Physician, and a TB nurse. There is a District Supervisor in each district who is responsible for the TB activities.

TB facilities include: 149 health centers with DOTS capacity, and 800 health posts with the potential for expansion of community-based DOTS.<sup>18</sup> Mozambique has a total of 250 labs with smear microscopy and one National Laboratory in Maputo responsible for multi-drug resistance testing and drug sensitivity testing (DST).

#### *Overview of the Mozambique TB control strategy*

A 2007 Tuberculosis Control Assistance Program (TB-CAP) baseline survey found many strengths of the Mozambique TB control strategy. There is strong political commitment, evidenced by a NTP central unit with young dynamic leaders and the existence and implementation of an up-to-date National Strategic Plan

(2008-2012). Additionally, diagnosis and treatment of TB are well integrated into primary health care; there are increasing treatment success rates; there is district- level DOTS and collaboration of TB/HIV; many TB+ patients are tested for HIV.<sup>19</sup> Even so, weaknesses included: poor supervision, training and quality assurance in provinces and districts; some districts needed lab equipment and there was a general lack of boxes to store and transport slides for quality assurance; training of lab techs and quality checks of their performance was lacking; there was insufficient case detection and deficient patient health education, and an overall lack of community mobilization. DOTS works best at the highest levels and decentralization is slowly progressing; there is a need for continued integration with HIV. Despite political will to reach community level with CB-DOTS, Mozambique has significant needs in the implementation phase.<sup>20</sup>

#### *The TB burden in Gaza Province*

All types of TB cases in Gaza province increased from 2007 to 2008. Sputum Smear Positive cases rose from 1,801 to 1,883, Sputum Smear Negative (SS-) cases went from 1,508 to 1,856 and cases of recurring TB rose from 235 to 276.<sup>21</sup> For 2007, 70.8% of the notified cases in Gaza were cured, 3.3% completed the course of treatment but did not return for a sputum test, so seroconversion could not be determined. The TB case fatality rate was over 20/100,000 SS+ cases.<sup>22</sup> There was an 11.5% abandonment rate and a 5.2% transfer rate. In 2008, 65.3% of new SS+ cases were also tested for HIV, while of the new HIV cases; only 24.1% were screened for TB.<sup>23</sup> Based on WHO estimates for case detection and the 2007 census, approximately 61% of the cases in Gaza were found, thus 1,182 cases were not detected. In 2008 the total number of TB cases was 4,693; 2,990 (64%) of them were also HIV+<sup>24</sup>.

#### *Existing diagnostic TB treatment services in Gaza Province*

Gaza province is limited in its ability to detect and treat TB. Currently, the village health post staff have received training to be able to collect sputum and send it to the district health center for testing. However, chronic shortages of the sputum collection bottles have hampered this process. While the national plan is for laboratory technicians to receive continuous training, some area technicians reported their last training sessions were in 2006. Following TB detection, treatment historically has been only available at the district health centers; long distances coupled with limited transportation options create barriers to treatment. Treatment protocols are consistent with international recommendations and the national plan, but remain out of reach for many TB patients due to poor infrastructure. Even facility-level DOTS is only available in 54.1% of clinics in Gaza, compared to 70.9% nationally. Drug supply is hampered by a weak central drug warehouse, poor communication, and the inability to enforce national policy requiring three months of drugs on hand and three months of stock. The monitoring and evaluation system is structured well, but it is hindered by a lack of capacity at the district level to critically examine data and implement activities based on outcomes. In much of the WR Vurhonga TB program area, access to health care was improved during prior child survival projects (1995-2009) via the selection and training of village level Community Health Workers, called *socorristas*, operating in community constructed health posts and remunerated by patient fees. These *socorristas* are now incorporated into the MOH system for community case management as *Agentes Polivalentes de Elementares* (APEs).

#### *Project Goal and Objectives*

The project goal is to reduce the burden of TB, in line with the Stop TB Strategy and Mozambique National Strategic Plan. Its primary objectives are to increase the case notification rate by 50% and achieve 85% treatment success rate for CB-DOTS in project areas.

Intermediate Result 1: People with TB will be empowered to seek and complete treatment with the support of their communities. (45% Effort)

Strategy 1.1: Advocacy, Communication, and Social Mobilization (ACSM) (Rural Districts)

- Objectives:* Increase knowledge that TB is transmitted through the air by coughing from 20.7% to 60%  
Increase knowledge that cough longer than three weeks is a sign of TB from 13.3% to 60%  
Sustain the high percentage of respondents surveyed who know that TB is curable at 85%  
Increase knowledge that TB treatment is available for free from 39.7% at baseline to 80%  
Train 100% of Care Group Volunteers (CGVs) in CB-DOTS  
Train 100% of functioning Village Health Committees (VHC) in TB

Strategy 1.2: Case Detection (Rural Districts)

- Objectives:* Increase the quarterly case notification rate (CNR) by 50% from 110 to 165  
Maintain the high percentage of TB suspects examined by sputum microscopy at 80%  
Increase the percentage of referrals made by volunteers (measured at the HC and at the community) from 20.6% to 60%

Strategy 1.3: Treatment Compliance (Rural Districts)

- Objectives:* Conduct cohort analysis of treatment outcomes for SS+ patients including:  
Increase the rate of treatment success from 78.6% to 85%  
Maintain the high level of sputum smear conversion at 90%  
Eighty-five percent of SS- patients will complete their full course of treatment  
Increase the percentage of patients on CB-DOT from 26.4% to 60%

Strategy 1.4: Community Health Information System (C-HIS) (Rural Districts)

- Objectives:* Eighty percent of VHCs will have local data on TB from the previous quarter  
Eighty-three percent of HCs will compile C-HIS data collected by volunteers on TB

Intermediate Result 2: Strengthen NTP Systems to improve TB service delivery and patient outcomes. (45% Effort)

Strategy 2.1: Facility Assessments (Rural Districts and Urban Centers)

- Objectives:* Conduct quarterly assessments of all health centers in the project area  
One hundred percent of HC assessments will be conducted with participation from the District TB Supervisors or designated representative

Strategy 2.2: Diagnostic Quality (Rural Districts and Urban Centers)

- Objectives:* Bring the proportion of TB suspects with SS+ confirmation in line with international standards by lowering it from 44.6% to between 10% and 25%  
Maintain the low proportion of major errors at less than 1%

Strategy 2.3: Access (Rural Districts)

- Objectives:* Less than 10% of HFs will report sputum bottle stock-outs in the previous quarter

Strategy 2.4: Referral (Rural Districts)

- Objectives:* Seventy-five percent of the patients referred from HPs will be recorded at health center  
Eighty percent of TB+ patients will return to the HP after receiving their diagnosis

Strategy 2.5: Information Systems (Rural Districts and Urban Centers)

- Objectives:* Less than 5% of HCs reporting drug stock-outs of essential TB drugs for the last quarter  
Less than 2% of those who start treatment will drop out (Interruption rate)

Strategy 2.6: Supervision (Rural Districts)

- Objectives:* Eighty-five percent of HP will be supervised by the District TB Supervisor during the previous quarter as reported in the M-DRAT  
Eighty-five percent of HPs will report supervisory visits by the District TB Supervisor

Strategy 2.7: Coordination with NTP (Rural Districts and Urban Centers)

- Objectives:* Attend 80% of meetings to which WR is invited  
Conduct six joint supervisory visits to HPs each quarter

Intermediate Result 3: Decrease the burden of HIV in people with TB and decrease the burden of TB among PLWHA. (10% Effort)

Strategy 3.1: TB and HIV Education through ACSM (Urban Centers)

- Objectives:* Train 60 OVC and youth volunteers in TB including stigma reduction  
Train three PNs in TB including stigma reduction

Strategy 3.2: Intensified TB Case Finding among PLWHA (Urban Centers)

- Objectives:* Train 40 HBCAs in TB case finding, referral and stigma reduction

Strategy 3.3: Routine HIV/ TB Testing (Urban Centers and Rural Districts)

- Objectives:* Improve the percentage of HIV+ patients screened for TB from 46.6% to 60%  
Maintain high levels of HIV testing among TB patients at 95%

Strategy 3.4: Cotrimoxazole Prevention Therapy (CPT) (Urban Centers and Rural Districts)

- Objectives:* Maintain high levels of CPT in HIV/TB patients at 90%  
Less than 25% of HCs reporting stocks out of Cotrimoxazole in the previous quarter

Strategy 3.5: Case Management of Co-Infections (Urban Centers)

- Objectives:* Number of HBCAs trained on CB-DOT

## **C. PROCESS AND PARTNERSHIP BUILDING**

World Relief, through previous child survival projects, has worked closely with the district health departments as well as provincial leaders. District health staff are aware of the upcoming project's activities and are familiar with the assessment process. The baseline HFA was conducted jointly by the project's M&E Manager, the Provincial TB Coordinator and corresponding District TB Supervisor. While the Provincial TB Coordinator will not be able to attend every assessment going forward, he will be invited to participate in those conducted at midterm and end of project.

## **D. METHODS**

The purpose of this HFA is to provide a baseline against which the Vurhonga CB-DOTS project will measure the impact of health facility activities at midterm and at the end of project (EOP). Baseline measurements for the key indicators were used to inform project design and help in target setting.

The HFA makes use of routine data related to TB and HIV collected and reported on by district level health facilities. Through a collaborative process with the Provincial NTP and MOH leaders, the DRAT tool (created by MCDI) was modified to reflect the context in Gaza as well as to measure specific project indicators. This modified DRAT was used to collect baseline information and will be repeated regularly including in conjunction with the midterm and final project assessments. Analysis of the M-DRAT is conducted with the use of an Excel spreadsheet to track results and indicators under the supervision of the M&E Manager with technical support from WR Headquarters. Data collected will be compared to information gathered at the community level for consistency. Following each HFA using the M-DRAT, results will be shared with each HC, reported back to the Provincial NTP on a regular basis and disseminated to the community through the CGVs and VHCs.

The M-DRAT contains 16 questions covering the following topics:

- Questions 1-2 Background and staffing
- Question 3 Current registered TB patients
- Question 4 TB Suspects
- Question 5 Sputum turnaround time
- Question 6 Sputum smear conversion
- Question 7 Treatment outcomes
- Question 8 MDR testing
- Questions 9-10 Patient card accuracy
- Question 11 HIV/TB integration
- Question 12 Quality assurance
- Question 13 Advocacy and IEC materials
- Question 14 Drug management
- Question 15 Testing supplies
- Question 16 Supervisory visits

*Project Indicators analyzed using the M-DRAT*

Strategy	Location	Indicator	Numerator	Denominator
IR1: Empower people with TB to seek and complete treatment, with the support of their communities (45% effort)				
S.1.2: Case Detection	Rural Districts	Case Notification Rate*	Number of new SS+ pulmonary TB cases reported x 100,000	Total population in a specified area
		Percentage of TB suspects examined by sputum microscopy	Number of TB suspects examined by sputum microscopy	Total number of TB suspects
		Number of referrals received from volunteers	Number of TB suspects referred by the community as reported by the HC	N/A
Cohort analysis for treatment outcomes of SS+ patients				
S.1.3: Treatment Compliance	Rural Districts	Treatment success	Number of SS+ pulmonary TB cases registered in a specified period that were cured plus the number that completed treatment	Total number of SS+ pulmonary TB cases registered in the same period
		Cure rate	Number of SS+ patients who were SS- at the final (5th month) sputum test	Total number of SS+ pulmonary TB cases registered in the same period
		Treatment completed	Number of patients who did not return for the final sputum test, but did complete the entire course of medication	Total number of SS+ pulmonary TB cases registered in the same period
		Treatment failure	Number of patients whose final sputum test was SS+ even though they completed the full course of treatment	Total number of SS+ pulmonary TB cases registered in the same period
		Interruption rate	Number of patients who stopped the treatment for two months or more	Total number of SS+ pulmonary TB cases registered in the same period
		Mortality rate	Number of patients who died while on TB treatment	Total number of SS+ pulmonary TB cases registered in the same period
		Transfer rate	Number of patients who transferred to another health facility during the course of treatment	Total number of SS+ pulmonary TB cases registered in the same period
		Percentage of SS- patients completing treatment**	Number of SS- TB patients who successfully completed a full course of treatment	Number of SS- TB cases registered in the same period
		Percentage of patients on CB-DOT	Number of patients on CB-DOT	Total number of SS+ TB patients
		Sputum smear conversion	Number of SS+ patients who converted to SS- after the intensive phase of treatment	Total number of SS+ patients pre-treatment
IR2: Strengthen National Tuberculosis Program (NTP) Systems to improve TB service delivery and patient outcomes (45% effort)				
S.2.1: Assessment	Rural Districts & Urban Centers	Percentage of health center assessments conducted quarterly	Total number of HC assessments conducted each quarter	Total number of HCs
		100% of health center assessments will be conducted	Total number of HC assessments conducted with participation from the District TB	Total number of HCs

		with participation from the District TB Coordinator or designated representative	Coordinator or designated representative	
S.2.2: Diagnostic Quality	Rural Districts & Urban Centers	Proportion of major errors	Number of errors, reporting (+) as (-) or visa versa	Total number of sputum smears reviewed
		Proportion of TB suspects with SS+ confirmation	Number of TB suspects that are SS+	Total number of TB suspects
S.2.5: Info Systems	Rural Districts & Urban Centers	Percentage of HC reporting drug stock outs in the last quarter	Number of HCs reporting drug stock outs of essential TB medications in the last quarter	Total number of HCs
S.2.6: Supervision	Rural Districts	Percentage of HPs supervised by the District TB Coordinator during the previous quarter	Number of HPs who received a supervisory visit by the District TB Coordinator during the previous quarter as reported by the District TB Coordinator	Total number of HPs
IR3: Integrate TB/HIV activities to address high co-infection rates (10% effort)				
S.3.3: HIV/TB Testing	Urban Centers & Rural Districts	Percentage of HIV+ patients screened for TB	Number of HIV+ patients screened for TB	Total number of HIV+ patients examined
		Maintain high levels of HIV testing among TB patients	Number of TB patients tested for HIV	Total number of TB patients (SS+ and SS-)
S.3.4: CPT	Urban Centers & Rural Districts	Proportion of TB/HIV patients on CPT	Number of TB/HIV patients who have received at least one dose of CPT during treatment for TB	Total number of TB/HIV patients (SS+ and SS-)
		Percentage of HCs reporting stock outs of Cotrimoxazole in the last quarter**	Number of HCs reporting stock outs of Cotrimoxazole in the previous quarter	Total number of HCs

\* The original case notification rate included all TB patients; this value includes an estimate for the number of new cases based on the total percentage of new patients in treatment at the time of the survey. This will updated at the next M-DRAT.

\*\*Baseline data not available at this time

### *Sampling Design*

The assessment tool was administered in 100% of health facilities within the project area with the means to diagnose TB. This included five rural health centers in Chicualacuala, Massangena, Chigubo, Massingir and Mabalane; one semi-urban health center in Guija (referred to hereafter as a rural HC); one urban hospital in Macia and the HIV/TB specialty hospital in Chokwe. The M-DRAT was administered in each health center and hospital and every patient was counted within the relevant timeframe or period. Therefore, the results represent universal coverage of all registered TB patients in the project area.

### *Data Collection and Analysis*

Data collection occurred March 8<sup>th</sup> through the 12<sup>th</sup>, 2010 for the rural areas, on April 26<sup>th</sup> in Chokwe and on May 3<sup>rd</sup> in Macia. Administration of the tool took approximately five hours to conduct at each facility, decreasing somewhat as familiarity with the tool increased. Obstacles included the length of time required to complete the tool, distances between the health centers and delays in receiving authorization from the NTP to conduct the survey in the urban areas. The data was entered into an Excel file by the M&E Manager and further analyzed by an MCH Specialist working closely with the project.

## E. RESULTS

### Project Indicators captured by the HFA

Strategy	Location	Indicator	Baseline			Target
			Numerator	Denominator	Percent/Total	
IR1: Empower people with TB to seek and complete treatment, with the support of their communities (45% effort)						
S.1.2: Case Detection	Rural Districts	Case Notification Rate for SS+ adults*	60	218,191	110	165
		Percentage of TB suspects examined by sputum microscopy	113	136	83.1%	80%
		Percentage of referrals received from volunteers	28	136	20.6%	60%
S.1.3: Treatment Compliance  S.1.3, 2.5	Rural Districts	Cohort analysis for treatment outcomes of SS+ patients				
		Treatment success	44	56	78.6%	85%
		Cure rate	40	56	71.4%	-
		Treatment completed	4	56	7.1%	-
		Treatment failure	1	56	1.8%	-
		Interruption rate	2	56	3.6%	<2%
		Mortality rate	6	56	10.7%	<7%
		Transfer rate	3	56	5.4%	-
		Percentage of SS- TB patients successfully completing treatment	N/A	N/A	N/A	85%
		Percentage of patients on CB-DOT	38	144	26.4%	60%
Sputum smear conversion	84	97	86.6%	90%		
IR2: Strengthen National Tuberculosis Program (NTP) Systems to improve TB service delivery and patient outcomes (45% effort)						
S.2.1: Assessment	Rural Districts & Urban Centers	Percentage of health center assessments conducted quarterly	8	8	100.0%	100%
		100% of health center assessments will be conducted with participation from the District TB Coordinators or designated representative	8	8	100.0%	100%
S.2.2: Diagnostic Quality	Rural Districts & Urban Centers	Proportion of major errors	0	40	0.0%	<1%
		Proportion of TB suspects with SS+ confirmation (WHO)	203	455	44.6%	10-25%
S.2.5: Info Systems	Rural Districts & Urban Centers	Percentage of HC reporting drug stock outs in the last quarter	3	8	50.0%	<5%
S.2.6: Supervision	Rural Districts	Percentage of HPs supervised by the District TB Coordinator during the previous quarter	6	6	100.0%	85%
IR3: Integrate TB/HIV activities to address high co-infection rates (10% effort)						
S.3.3: HIV/TB Testing	Urban Centers & Rural Districts	Percentage of HIV+ patients screened for TB	1609	3454	46.6%	60%
		Maintain high levels of HIV testing among TB patients	509	510	99.8%	>95%
S.3.4: CPT	Urban Centers & Rural Districts	Proportion of TB/HIV patients on CPT	379	380	99.7%	90%
		Percentage of HCs reporting stock outs of Cotrimoxazole in the last quarter**	N/A	N/A	N/A	<25%

\* The original case notification rate included all TB patients; this value includes an estimate for the number of new cases based on the total percentage of new patients in treatment at the time of the survey. This will be updated at the next M-DRAT.

\*\*Baseline data not available at this time

## F. DISCUSSION

### *Staffing*

The six rural health centers had nine staff trained in microscopy who examined 113 slides in three months for an average of 4.2 slides per staff member per month. In Macia, the three microscopy staff examined 98 slides averaging 10.9 slides each per month, while in Chokwe the four microscopy staff examined 13.6 slides per month, per person. On average, there were 2.8 microscopists per 100,000 people in the project area. When asked, the average time since their last training was 15 months; however, there was a great deal of variation between two and 41 months.

### *Registered TB Patients*

The rural HCs had 144 registered TB patients currently receiving treatment, of which 38 reported that they were receiving CB-DOT. While there is no formal system for selecting, training and supporting treatment observers, some clinics have encouraged their patients to find someone to watch them take their medication every day. The two urban centers reported 218 cases with 62 patients on CB-DOT. When cross-referencing the TB register with patient cards there was almost universal agreement (99.7%) with only one rural HC missing one patient card.

### *Suspected TB*

The percentage of TB suspects examined by sputum microscopy at the rural HCs was 83.1% with 82.2% across the entire project area. The rural HCs registered 136 patients, 28 of whom were referred from the community. The urban HCs reported no cases as a result of community referral, which could indicate that patients were coming on their own or could result from a lack of documentation. Of the 136 rural suspects, 14 were examined by x-ray and 21 by another method such as physical exam. The smear positivity rate (number of positive cases divided by the total number of samples tested) for the rural health centers was 58.4%, 47.9% at Chokwe and 60.2% at Macia. These rates appear high and could be correlated with late referrals such that only patients with highly progressed TB are being referred and examined. The annualized case notification rate for the rural area was 110, while for the entire project area it was slightly higher at 122. Unfortunately, the case notification rate was originally collected for all TB patients; therefore, the CNR is estimated using the average number of new patients receiving TB treatment during the same time period. The M-DRAT tool has been updated and future reports will reflect the corrected rate. While not a project indicator, the program will track the case detection rate as this indicator is used at all levels of the NTP. Using expected case rates provided by the NTP for each district, the case detection rate was 65.0% in the rural areas and 77.9% if the urban areas are included. The percentage of TB suspects with SS+ confirmation was 48.5% in the rural areas, 36.1% in Chokwe and 57.3% in Macia.

### *Sputum Turnaround Time*

This measurement was difficult to obtain due to many documentation obstacles. For those samples collected locally through community sputum collection, there was no record of the date or time the sample was collected from the patient, only the date that the sample arrived at the HC. Additionally, there was no way to identify specimens collected in the community as opposed to samples produced at the HC. Of note, the HIV/TB hospital in Chokwe, Carmelo, will not accept community collected sputum samples and requires that the patient attend clinic in order to be physically examined. Moreover, it is the practice at some HCs to duplicate the collection or arrival date of the sputum sample instead of recording the actual date read or results reported. Consequently, average sputum turnaround time of 0.4 days may be artificially low.

### *Smear Conversion Rate*

The sputum smear conversion rate in the rural areas was 86.6%, while Chokwe reported a rate of 70.6% and Macia reported 65.5%. Some of this difference could be accounted for based on the higher rates of HIV/TB as discussed later, although the rate of HIV/TB was higher in Chokwe than Macia. It was difficult to find external sputum smear conversion rates from the NTP and it is uncertain if this is currently being used by the NTP as an intermediary indicator of treatment success.

### *Treatment Outcome*

Using cohort analysis for those patients who started treatment one year ago, treatment success in the rural HCs, as a combination of those cured plus those who completed treatment, was quite high at 78.6%. Those who failed to have sputum conversion by the end of treatment were 1.8% of the total, with 3.6% defaulting or having a gap in treatment for over two months. The mortality rate in the rural areas was 10.7%, which is similar to the national rates. Three patients of the 56 were transferred during this time, which is similar to the national and provincial levels. In Chokwe and Macia, treatment success was slightly lower at 75.8% and 74.4% respectively; however, the greatest difference could be seen in the mortality rates that were 16.6% in Chokwe and 15.4% in Macia. As stated above, this could be influenced by the high rates of HIV/TB.

### *MDR-TB*

According to national policy, all retreatment patients and patients who fail to have sputum conversion after the intensive phase should have sputum samples sent to the national reference laboratory to culture for MDR-TB. The difference between rural and urban HCs with regard to this practice was dramatic. In rural health centers, only 14.3% of retreatment patients and 25.0% of those with no SS conversion had had sputum sent for culture. However, 100% of these types of cases were cultured from the urban HCs. The M-DRAT did not collect information on the outcome of the MDR cultures, but this aspect will be added to the tool and measured hereafter.

### *Recording and Reporting*

The project randomly selected five or ten patient cards per clinic to check for data completeness and clinical management. The sample included 40 new adult cases, six adult retreatment cases and four pediatric TB cases. Overall, card completion was quite good with most fields above 90% complete. Less consistent areas included clinical notes, with only 87.3% completed, treatment outcomes with 87.3% complete and treatment adherence with 78.2%. When comparing the type of patient, age, and weight against the drug regimen and dosage, one error was detected in a new adult case from a rural HC.

### *TB/HIV Integration*

Across the project area, almost universal HIV testing of TB patients is occurring (99.8%). When reviewing individual TB Registers the HIV status of each patient is clearly listed and there is some variation within the results (for example, not every patient has the same status). As stated above, there is a distinction between the rates of HIV positive TB cases in the rural HCs as opposed to those tested in the urban HCs. The percentage of TB patients who are HIV+ in the entire project area is 74.5% with the rural HCs reporting 60.8%, Macia reporting 75.7% and Chokwe reporting 84.4%. A possible cause for this variation includes self-selection bias of those patients who are more ill seeking treatment at the specialty hospital; however, Chokwe's smear positive rate (47.9%) is lower than that of the rural areas (58.4%). Self-selection may also occur among those patients who feel that they have a greater risk of testing positive for HIV. Additionally, there could be a difference in the accuracy of the laboratory testing being conducted at the urban HCs as the comforts of the city make it easier to attract higher caliber staff. It is unlikely that difference in HIV rates

between the urban and rural settings would solely account for this variation, as the specialty hospital is the only testing facility for all of Chokwe district, whose population is 66.3% rural. The high rates of co-infection will have a direct impact on the clinical as well as behavior change outcomes. ART coverage is quite low (23.0% in Macia and 30.8% in the rural HCs) with the exception of Chokwe's Carmelo Hospital that is able to cover 69.3% of its HIV/TB patients with antiretroviral medications. CPT coverage among HIV/TB patients is almost universal at 99.7%.

The proportion of HIV+ patients that are screened for TB is reported much lower at 46.6% than the proportion of TB+ patients tested for HIV, with a large difference between the rural areas (reporting only 28.4% screening) and the urban HCs (reporting 78.3%). Overall, in the rural centers, the organization of the HIV data was more diffuse, which made data collection more cumbersome and time consuming, often requiring the interviewer to search large binders and review individual patient records instead of a comprehensive HIV Register. Moreover, when the rural baseline data were collected, the interviewers were informed that a memo had instructed staff to *always* check the box indicated that TB screening had been conducted. Said procedure was implemented during the timeframe measured by the baseline M-DRAT and undoubtedly affected the accuracy of results. A clear distinction could be seen in the period before the policy memo, when only the occasional box was checked, and afterward when every box was marked as completed. Chokwe and Macia, both urban facilities, demonstrated less evidence of this apparent data distortion as their results reflected greater variability than those of the rural health centers. Nonetheless, it is reasonable to conclude that the screening rate reported in the rural HCs may not be an accurate representation of TB screening. As a cross reference, the project will track the number of HIV+ patients screened for TB that are diagnosed SS+, as some correlation should be seen between screening and diagnosis. At Chokwe, 38.2% of HIV+ patients screened for TB tested SS+, Macia had 33.7% of their screened patients test positive, while among the rural HCs only 7.6% of HIV+ patients screened for TB tested positive for TB.

#### *External Quality Assurance Testing*

Prepared sputum slides were sent to the Provincial lab for quality review by both the urban centers and one rural HC. The remaining five rural HCs did not have any slides reviewed by an external laboratory. The rural center reported sending 20 slides, while Chokwe and Macia reported sending 10 each. No major errors, defined as reporting a positive sample negative or visa-versa, were reported. However, when examining the process of how slides were selected to be reviewed the interviewer discovered that the process was not random. Slides were individually chosen by laboratory technicians.

#### *IEC Materials*

Informational pamphlets about TB were available in seven of the eight HCs. Most were available in Portuguese, although one HC had information in both Portuguese and the local language, Shangaan. TB Posters were visible in six of the eight project area health centers.

#### *Drug Management*

The survey examined the stock availability, expiration dates, stock cards and total number of stock out days in the previous quarter for RHZE, RH in two strengths, Streptomycin, RHZ, and RH for children. One health center was currently out of Streptomycin and RH for children, while another was out of RH in two strengths. Most stock cards were accurate except for the first HC listed above. Looking at historical stock outs over the past quarter, one health center reported a stock out of streptomycin for 90 days, one was missing RH for 30 days, streptomycin for 60 days and RH for children for 30 days, and the last HC reported

a stock out of RH for 6 days. All eight HCs had a specified protocol for requesting medications but two (25%) reported not receiving the drugs as requested which led to the noted stock outs.

### *Testing Supplies*

All eight HCs had current stock of sputum collection bottles, slides, slide covers and stain. However, only six had alcohol available. Over the last quarter, there were stock outs of sputum collection bottles, slides and alcohol. The NTP had expressed concern at the time of proposal development that not every HC had a functioning microscope with access to electricity; however, the interview found that every HC had a working microscope and electricity or a generator.

### *Supervisory Visits*

NTP policy states that the District TB Supervisor should visit each HP at least once per quarter. When asked, seven of the eight supervisors reported that they visited every HP in their district during the previous quarter in contrast to the supervisor in Macia who was unable to conduct any visits. This finding, as reported on the official NTP forms, conflicted with information shared verbally at the time of data collection regarding numerous barriers that reportedly regularly foil supervision trips, including lack of transport. While there could have been renewed emphasis on the importance of supervisory visits during the quarter reported on, it is also possible that the per diem provided to the supervisors for field visits could be a financial incentive to over-report supervision.

### *External Comparisons*

The following table compares baseline data from the M-DRAT with other sources.

Indicator	Baseline HFA/ M-DRAT	2008 Provincial PNCT Report for Gaza <sup>25</sup>	2009 National PNCT Report (Gaza Data) <sup>26</sup>	Stop TB data for Mozambique <sup>27</sup>
Cure rate	71.4%	70.8%	75%	78%
Treatment success	78.6%	74.1%	N/A	79%
Treatment completion	7.1%	3.3%	N/A	1%
Treatment failure	1.8%	N/A	N/A	1%
Interruption rate	3.6%	11.5%	5.2%	5%
Mortality	10.7%	0.02%	14%	10%
Transfer rate	5.4%	5.2%	N/A	5%
Percentage of patients on CB-DOT	26.4%	N/A	N/A	N/A
Sputum Smear conversion rate	86.6%	N/A	N/A	N/A
HIV testing among TB patients	99.8%	N/A	79.9%	N/A
TB patients tested HIV+	74.5%	N/A	66.1%	N/A
CPT for HIV/TB patients	99.7%	N/A	98.7%	N/A
ART for HIV/TB patients	48.2%	N/A	33.6%	N/A
Case notification (by quarter)	31.3	N/A	21.87	N/A

### *Information Dissemination*

Dissemination of HFA results to the MOH will take place in conjunction with an upcoming planning meeting in the provincial capital and/or when MOH staff participate in training CB DOTS staff in Chokwe. Locally, results will be shared with village health committees and Care Group volunteers in conjunction with community mobilization and training, as project staff rotate through each village.

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- <sup>3</sup> Census 2008
- <sup>4</sup> UNDP. *The Human Development Index - going beyond income: Mozambique 2008*. Washington, 2009. [http://hdrstats.undp.org/2008/countries/country\\_fact\\_sheets/cty\\_fs MOZ.html](http://hdrstats.undp.org/2008/countries/country_fact_sheets/cty_fs MOZ.html) [hereafter HDI 2008]
- <sup>5</sup> World Health Organization. WHO Statistical Information System (WSIS) for Mozambique. Geneva, 2008. Available online <http://www.who.int/whosis> [hereafter WSIS 2008]
- <sup>6</sup> WSIS 2008
- <sup>7</sup> UNICEF. *Unite for Children, Mozambique*. Available Online [http://www.unicef.org/infobycountry/mozambique\\_2226.html?q=printme](http://www.unicef.org/infobycountry/mozambique_2226.html?q=printme) [hereafter UNICEF 2009]
- <sup>8</sup> Africa Region, Poverty Reduction and Economic Management. *Beating the Odds: Sustaining Inclusion in a Growing Economy. A Mozambique Poverty, Gender, and Social Assessment*. February 2008.
- <sup>9</sup> WSIS 2008
- <sup>10</sup> WSIS 2008
- <sup>11</sup> World Health Organization. *Global TB Control, 121-124*. Geneva, 2008 [hereafter WHO 2009]
- <sup>12</sup> World Health Organization. *Country Profile, Mozambique 2004*. Geneva, 2005.
- <sup>13</sup> Mozambique, National Program for Tuberculosis Control. *National Strategic Plan 2008-2012*. Mozambique 2007. [hereafter NSP 2007]
- <sup>14</sup> WHO 2009
- <sup>15</sup> WHO 2009
- <sup>16</sup> Republic of Mozambique, National AIDS Council. *Universal Declaration of Commitment on HIV and AIDS, Mozambique Progress Report for the United National General Assembly Special Session on HIV and AIDS 2006-2007*. Mozambique 2008. [hereafter HIV 2008]
- <sup>17</sup> NSP 2007
- <sup>18</sup> NSP 2007
- <sup>19</sup> Mozambique National Tuberculosis Control Program/ TB-CAP. *Situational Analysis of the National Tuberculosis Control Program (Baseline Survey)*. Mozambique, 2007. [hereafter TBCAP 2007]
- <sup>20</sup> TBCAP 2007
- <sup>21</sup> NSP 2007
- <sup>22</sup> Gaza Provincial Health Director. *Report on NTP Activities in 2008*. Mozambique 2009. [hereafter Gaza 2009]
- <sup>23</sup> Gaza 2009
- <sup>24</sup> Gaza 2009
- <sup>25</sup> 2008 Provincial PNCT Report for Gaza Province. 2009
- <sup>26</sup> 2009 NTP Annual Report for Mozambique, January 2010
- <sup>27</sup> Stop TB Report, 2009 for New SS+ cases

## Annex 1: Baseline M-DRAT Questionnaire

World Relief Vurhonga CB-DOTS Program  
Baseline Facilities Assessment  
February 2010



1. Name of facility: \_\_\_\_\_

Date of DRAT: \_\_\_\_\_

DRAT administered by: \_\_\_\_\_

Name and title of facility staff member(s) interviewed:

_____	_____	_____
Name	Title	Contact number

Hours the facility is open: \_\_\_\_\_

Days of the week the facility is open: \_\_\_\_\_

Since the treatment time for TB is long, we need to collect statistics using groups of patients based on when they started treatment. For this survey we will group patients or data by quarters (every three months). Then, we will look at groups of patients or data from three time frames: approximately three months ago, six months ago and one year ago depending on which indicator we are measuring.

Current quarter: \_\_\_\_\_ Year: \_\_\_\_\_

The **three month timeframe** will consist of dates from the previous quarter. For example, if the interview is being done in February 2010 (Q1 '10), check statistics for October- December 2009 (Q4 '09).

Last quarter: \_\_\_\_\_ Year: \_\_\_\_\_

The **six month timeframe** will consist of dates from two quarters previous to the quarter when the interview is being done. For example, if the interview is being done in February 2010 (Q1 '10), check statistics for July through September of the previous year (Q3 '09).

Two quarters ago: \_\_\_\_\_ Year: \_\_\_\_\_

The **one year timeframe** will consist of dates from one year (or four quarters) previous to the interview quarter. For example, if the interview is being done in February 2010 (Q1 '10), check for patients registered in January through March of 2009 (Q1 '09).

Current quarter: \_\_\_\_\_ Previous Year: \_\_\_\_\_

**2. Number of staff members at facility:**

	Male	Female	Total
Medico			
Tecnico			
Enfermeiro			

**2a. Staff trained in TB:**

	Male	Female	Total
Medico			
Tecnico			
Enfermeiro			

**2b. Microscopy staff**

	Male	Female	Total
Number of staff performing microscopy at this facility			

- Ask all available staff performing microscopy, what was the date of his/her last microscopy training? \_\_\_\_\_

**3. Check the TB register for the total number of current TB patients (adult, SS+).**

	Male	Female	Total
Total number of TB patients:			
Number of new TB patients (this is the first time they have been treated for TB):			
Number of retreatment patients:			
Number of patients on CB-DOT			
Number of patients on facility-based DOT			

- **Count the number of patient cards.**  
Are the number of patient cards and the number of patients on the registry the same?

Total number of patient cards: \_\_\_\_\_

**4. Suspecting TB.** Using the three month timeframe (patients that were registered as suspects during the last full quarter), check the TB suspect register.

	Male	Female	Total
Total number of TB suspects registered during this time:			
Number of suspects assessed via sputum smear:			
Number of suspects assessed via x-ray:			
Number of suspects assessed via another method (i.e. Physical exam):			
Total number of positive sputum samples:			
How many of the TB suspects were referred from the community (for example: Socorrista, volunteer, animator)			

**5. Sputum turnaround time\*.** Ask to see the sputum/laboratory book. Look at the sputum tests during the three month timeframe, select the first five samples tested, and record the date the laboratory received the sputum sample and the date the sputum sample was read.

	Date the sample was received by the lab	Date the sample was read by the lab
1		
2		
3		
4		
5		

**6. Smear conversion rate.** Using the six month timeframe, check the TB register for smear-positive patients who began treatment during this time.

	Male	Female	Total
Total number of smear-positive patients who began treatment during this time:			
Number of these patients that were smear-negative after the intensive phase:			

**7. Treatment Outcome.** Using the one year timeframe, check the TB register for the number of smear positive patients who started treatment during this time.

	Male	Female	Total
Total number of patients who started treatment during this time:			
Number of patients with a negative smear by the end of treatment (Cured):			
Number of patients who remained smear-positive at the end of treatment (Treatment Failure)			
Number of patients who completed medication, but did not return for final			

sputum test (Treatment Complete):			
Number of patients who stopped treatment for two months or more (Interruption/Abandonment):			
Number of patients who died:			
Number of patients who transferred to another facility:			

**8. MDR Testing.** Using the one year timeframe, look for smear-positive retreatment patients at the start of treatment, patients who remain smear positive at 3 months or treatment failures (smear positive after 6 months). Check to see if sputa samples were sent for culture and susceptibility testing (sent to Maputo).

	Male	Female	Total
Total number of smear-positive <b>retreatment</b> patients:			
Number of sputa sent to Maputo at the start of treatment:			
Number of smear-positive patients after three months			
Number of sputa sent to Maputo after the intensive phase:			
Number of patients who are smear-positive after a full course (6 months) of treatment:			
Number of sputa sent to Maputo after full treatment:			

**Questions 9 and 10:**

***Pull all patient cards from during the one year timeframe.  
Select 10 patient cards at random – for example, every third card.***

**9. Recording and Reporting.** Check cards for completeness.

	Enter the number of cards filled in:
How many cards have a contact person listed?	
How many have the registration date (start of treatment) and register number filled in?	
How many have the address or a clear descriptive of how to find the home of the patient?	
How many list the patient origin and patient category (new, retreatment)?	
How many of the patients received sputum testing?	

Of those who received testing, how many cards list the sputum results?	
How many cards list the treatment regimen and dosage?	
How many cards have the adherence section up to date (if weekly treatment is given – up to one week ago; if monthly treatment – up to one month ago) and have correct dots or dashes?	
How many include clinical notes on progress or the condition of the patient (including the weight of the patient at each visit)? Notes can also be made here on tracing the patient in case of irregular attendance	
How many have the treatment outcome and discharge data completed on their cards?	

**10. Clinical management.** Check each card to see if the patient is getting the correct regimen:

Type of Patient	Number of cards for this type of patient	Number of cards completed correctly	Number on correct dosage*
New patients (Regimen 1)			
Retreatment patients (Regimen 2 including streptomycin for the correct duration)			
Children (Regimen 3)			

\*Check that each patient is getting the correct dosage according to patient's weight and duration of his/her treatment.

**11. TB-HIV Integration.** Ask to see the HIV/VCT register. Look at records in the six month timeframe and check whether TB patients are offered VCT and whether HIV positive clients are being screened for active TB.

	Male	Female	Total
Total number of TB patients:			
Number of TB patients referred for VCT:			
Number of TB patients also HIV+			
Number of HIV+/TB+ patients who receive at least one dose of co-trimoxazole preventative therapy (CPT) during TB treatment			
Number of HIV+/TB+ patients who are on or continue ARV therapy, during or at the end of TB treatment			

Number of current HIV+ patients:			
Number of HIV+ patients tested for TB:			
Number of HIV+ patients diagnosed with TB:			

**12. Quality Assurance.** Check the TB quality log for sputa sample slides sent to Maputo for review during the six month timeframe.

- How many slides were sent? \_\_\_\_\_
- How many errors were detected? \_\_\_\_\_  
*\*Errors include reading a positive sample as negative or reading a negative slide as positive\**
- What is the process to decide which slides are sent for quality review? \_\_\_\_\_  
 \_\_\_\_\_

**13. Advocacy and IEC materials.** Check to see if there are TB posters and pamphlets visible and available to patients.

- Are TB pamphlets available?  Yes  No
  - In Shangaan?  Yes  No
  - In Portuguese?  Yes  No
- Are there TB posters on walls?  Yes  No
  - In Shangaan?  Yes  No
  - In Portuguese?  Yes  No

**14. Drug management.** Ask to see the pharmacy. Check the supply of TB drugs.

There should be adequate stock – a rough rule of thumb is two bottles of intensive phase drugs per patient. Stock cards for all drugs should reflect the actual stock on hand (including zero if drugs are out of stock).

Drug	Amount Available (#)	Valid Expiration Date? (Yes/No)	Adequate stock? (Yes/No)	Accurate stock cards? (Yes/No)	# of Stock outs during the previous quarter
RHZE					

RH in 2 strengths					
EMB					
Streptomycin					
RHZ					
RH for children					

- Is there a schedule for ordering TB drugs?  Yes  No  
 If Yes, what is the schedule? \_\_\_\_\_  
 \_\_\_\_\_
- What if drugs run out between scheduled ordering? \_\_\_\_\_  
 \_\_\_\_\_
- Have you ever not received the drugs ordered?  Yes  No  
 If yes, how many times has this occurred in the past year? \_\_\_\_\_  
 Did this result in you running out of drugs?  Yes  No  
 How long were you without medication (in days)? \_\_\_\_\_

**15. Testing Supplies.** Ask to see the supplies for collecting, fixing, staining and reading sputum samples.

	Available? (Yes/ No)	If no, how many <b>days</b> have they been out of stock?
Sputum collection bottles		
Slides		
Slide covers		
Alcohol(?) for slide fixing		
Slide stain (do they just use one kind?)		
Functioning microscope		
Other:		
Other:		

Other:		
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**16. Supervisory visits.** Ask to see the log of supervisory visits.

How many supervisory visits were made to the community during the last quarter? \_\_\_\_\_

**Interview completed.**

***At completion of interview:***

Tell the interviewee that a formal assessment of the results will be provided at a later date to be arranged, including an opportunity to discuss strategies for service improvement.

***Your notes on strengths and challenges at this facility:***

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**Annex 2: Raw Data Tables**  
**\*\*For translation, please see Annex 1**

Guija  
 Data do  
 exame: 8-Mar-  
 2010

2. Número de membros do pessoal nesta  
 facilidade:

	Masculino	Fêmea	Total	Verificação de dados
Medico	1	0	1	1
Tecnico	3	1	4	4
Enfermeiro	4	2	6	6

2a. A equipe de  
 funcionários treinou na TB

	Masculino	Fêmea	Total	Verificação de dados
Medico	1	0	1	1
Tecnico	2	0	2	2
Enfermeiro	2	1	3	3

2b. Equipe de funcionários  
 da microscopia

	Masculino	Fêmea	Total	Verificação de dados
Número de equipe de funcionários que executa a microscopia nesta facilidade	2	0	2	2

● Pergunte a toda a equipe de funcionários disponível que executa a microscopia, o que era a data de seu/seu último treinamento da microscopia?

Incorpore datas às pilhas individuais	9/9/2006			
Meses desde o último treinamento	41			

3. Verific o registro da TB para ver se há o número total de pacientes atuais da TB (adultos, SS+)

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes da TB:	26	21	47	47
Número de pacientes	23	20	43	43

novos da TB				
Número de pacientes da retirada	3	1	4	4
Número de pacientes em CB-DOT	0	0	0	0
Número de pacientes no DOT facilidade-baseado	26	21	47	47

● Conte o número de cartões pacientes.

	Total
Número total de cartões pacientes:	46

São o número de cartões pacientes e o número de pacientes no registro o mesmos? Não

4. Suspeitando a TB. Usando o marco temporal de três meses, verifique o registro do suspeito da TB.

	Masculino	Fêmea	Total	Verificação de dados
Número total de suspeitos da TB registou durante este tempo	28	26	54	54
Quantos doentes suspeitos foram referidos da comunidade?	8	8	16	16
Número de suspeitos avaliados através da mancha do sputum	23	23	46	46
Número de suspeitos avaliados através do raio X	5	3	8	8
Número de suspeitos avaliados através de um outro método	3	3	6	6
Número total de amostras positivas do sputum	9	13	22	22

5. Tempo de entrega até resultado. Peça ver a livro de expectoração/ laboratório. Analise os testes de expectoração durante o período de 3 meses e selecione o primeiro 5 amostras e registre a data recebido e o dia que o resultado foi obtido de cada.

	Data em que a amostra foi recebido	Data em que o resultado foi obtido	Número de dias
Paciente 1	10/1/2009	10/1/2009	0
Paciente 2	10/1/2009	10/1/2009	0
Paciente 3	10/1/2009	10/1/2009	0

Paciente 4	10/1/2009	10/1/2009	0
Paciente 5	10/4/2009	10/4/2009	0

6. Taxa de conversão da mancha. Usando o marco temporal de seis meses, verifique o registo da TB

para ver se há pacientes manchar-positivos que começaram o tratamento durante este tempo.

	Masculino	Fêmea	Total	Verificação de dados
Número total de pacientes manchar-positivos que começaram o tratamento durante este tempo:	14	13	27	27
Número destes pacientes que eram manchar-negativos após a fase intensiva	12	11	23	23

7. Resultado do tratamento. Usando o um marco temporal do ano,

verifique o registo da TB para ver se há o número de pacientes positivos da mancha que começaram o tratamento durante este tempo.

	Masculino	Fêmea	Total	Verificação de dados
Número total de pacientes que começaram o tratamento durante este tempo	11	7	18	18
Número de pacientes com uma mancha negativa para o fim do tratamento (C)	8	6	14	14
Número de pacientes que permaneceram manchar-positivo (POS)	0	0	0	0
Número de pacientes que terminaram a medicação, mas não retornou para o teste final do sputum (TC)	2	1	3	3
Número de pacientes que pararam o tratamento para dois meses ou mais (AB)	1	0	1	1
Número de pacientes que morreram (OB)	0	0	0	0
Número de pacientes que transferiram a uma outra facilidade (T)	0	0	0	0

8. Teste de MDR. Usando o um marco temporal do ano, procure os pacientes manchar-positivos da retirada no início do tratamento,

os pacientes que permanecem manchar-positivos após a fase intensiva, ou as falhas do tratamento.

Verific para ver se as amostras dos sputa foram emitidas para o teste da cultura e do suseptability.

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes manchar-positivos da retirada	2	0	2	2
Número de sputa emitiu a Maputo no início do tratamento	0	0	0	0
Número de pacientes manchar-positivos após a fase intensiva	0	0	0	0
Número de sputa emitiu a Maputo após a fase intensiva	0	0	0	0
Número de pacientes que são manchar-positivos após um curso de tratamento cheio	0	0	0	0
Número de sputa emitiu a Maputo após o tratamento cheio	0	0	0	0

9. Gravação e relatório. Cartões de verificação para a integralidade.

	Número de cartões completos	Porcentage m
Quantos cartões uma pessoa de contato alistou?	5	100.0%
Quanto a data do registo e regista o número preencheu?	5	100.0%
Quanto o endereço preencheu?	5	100.0%
Quanto lista a categoria paciente da origem e do paciente?	5	100.0%
Quantos pacientes receberam o teste do sputum?	3	60.0%
Daqueles que receberam o teste, quantos cartões alistam os resultados do sputum?	3	100.0%
Quantos cartões alistam o regime e a dosagem de	5	100.0%

tratamento?		
Quantos cartões têm a seção da aderência moderna?	4	80.0%
Quanto incluem notas clínicas?	3	60.0%
Quanto daqueles cujo o resultado do tratamento e se descarrega os dados terminaram?	3	60.0%

10. Gerência clínica. Verific cada cartão para ver se o paciente está começando a dosagem correta.

	Número de cartões para este tipo de paciente	Número de cartões terminados corretamente	Número na dosagem correta	A porcentagem dos cartões terminou	Porcentagem na dosagem correta
Pacientes novos	4	4	4	100.0%	100.0%
Pacientes da retirada	0	0	0		
Crianças	1	1	1	100.0%	100.0%

11. Integração de TB-HIV. Peça para ver o registro de HIV/VCT. Olhe os registros no marco temporal de seis meses e verifique se os pacientes da TB estejam oferecidos VCT e se os pacientes seropositivos estão sendo selecionados para a TB.

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes da TB:	30	33	63	63
Número de pacientes da TB consultou para VCT	29	33	62	62
Número dos pacientes igualmente HIV+ da TB	16	26	42	42
Número de pacientes de TB também HIV+ que receberam pelo menos uma dose de TPC	16	26	42	42
Número de pacientes de TB também HIV+ que receberam TARV durante ou depois de tratamento de TB	6	9	15	15
Número de pacientes atuais de HIV+	403	1239	1642	1642
Número de pacientes de HIV+ selecionados para a TB	58	212	270	270

Número de pacientes de HIV+ diagnosticados com TB	12	15	27	27
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12. Garantia de qualidade. Verific o registro da qualidade da TB para ver se há slids de amostra dos sputa emitidos a Maputo para a revisão durante o marco temporal de seis meses.

● Quantas correções foram emitidas?	<u>0</u>	Porcentagem dos erros
● Quantos erros foram detectados?	<u>0</u>	#DIV/0!

● Que é o processo para decidir que correções são emitidas para a revisão de qualidade?

5 positivas, 5 negativas, seleccionadas pecos, respectivos tecnicos

São as correções escolhidas aleatória ou por um terceiro? \_\_\_\_\_

13. Defesa e materiais do IEC. Verific para ver se há posters e panfletos da TB visíveis e disponíveis aos pacientes.

● Estão os panfletos da TB disponíveis?	<u>Sim, no português somente</u>
● Há posters da TB nas paredes?	<u>Sim, no português somente</u>

14. Gerência da droga. Peça para ver a farmácia. Verific a fonte de drogas da TB.

Droga	Uma quantidade e disponível (#)	Data de validade válida? (Sim/Não)	Estoque adequado? (Sim/Não)	Cartões conservados em estoque exatos? (Sim/Não)	# das dias sem stock durante trimestr e anterior:
RHZE	360	Sim	Sim	Sim	0
RH em 2 forças	432	Sim	Sim	Sim	0
EMB					
Streptomycin	600	Sim	Sim	Sim	0
RHZ	792	Sim	Sim	Sim	0
RH para crianças	2000	Sim	Sim	Sim	0

● Há uma programação para requisitar drogas da TB? Sim

Se sim, que é a programação?

Mensalmente

● Que se as drogas funcionam para fora entre programado requisita?

Não

● Que você nunca não recebido as drogas requisitou?

Não

Se sim, tem como frequentemente isto ocorreu no ano passado? (# de épocas)

Fêz este resultado em você que funciona fora das drogas?

Não

Quanto tempo era você sem medicação? (# de épocas)

15. Fontes de teste. Peça para ver as fontes para coletar, reparar, manchar e ler amostras do sputum.

	Fornecer disponível ? (Sim/Não)	Se Não, quantos dias foram para fora de estoque?
Frascos da coleção do Sputum	Sim	0
Corrediças	Sim	0
Deslize as tampas	Sim	0
Álcool para a fixação da corrediça	Sim	0
Deslize a mancha.	Sim	0
Microscópio de funcionamento	Sim	0
Outro		
Outro		
Outro		

16. Supervisão comunitaria. Pede o registo de visitas comunitarias.

Quantas visitas de supervisão na comunidade foram feitas nos últimos 3 meses?

1

Massingir

Data do exame: 15-Mar-2010

2. Número de membros do pessoal nesta facilidade:

	Masculino	Fêmea	Total	Verificação de dados
Medico	1	0	1	1
Tecnico	2	1	3	3
Enfermeiro	5	6	11	11

2a. A equipe de funcionários treinou na TB

	Masculino	Fêmea	Total	Verificação de dados
Medico	0	0	0	0
Tecnico	0	0	0	0
Enfermeiro	2	1	3	3

2b. Equipe de funcionários da microscopia

	Masculino	Fêmea	Total	Verificação de dados
Número de equipe de funcionários que executa a microscopia nesta facilidade	1	1	2	2

● Pergunte a toda a equipe de funcionários disponível que executa a microscopia, o que era a data de seu/seu último treinamento da microscopia?

Incorpore datas às pilhas individuais	12/31/2009			
Meses desde o último treinamento	2			

3. Verific o registo da TB para ver se há o número total de pacientes atuais da TB (adultos, SS+)

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes da TB:	10	9	19	19
Número de pacientes novos da TB	3	5	8	8
Número de pacientes da retirada	0	0	0	0
Número de pacientes em CB-DOT	0	0	0	0

Número de pacientes no DOT facilidade-baseado	10	9	19	19
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● Conte o número de cartões pacientes.

	Total
Número total de cartões pacientes:	19

São o número de cartões pacientes e o número de pacientes no registro o mesmos? Sim

4. Suspeitando a TB. Usando o marco temporal de três meses, verifique o registro do suspeito da TB.

	Masculino	Fêmea	Total	Verificação de dados
Número total de suspeitos da TB registrou durante este tempo	12	8	20	20
Quantos doentes suspeitos foram referidos da comunidade?	0	0	0	0
Número de suspeitos avaliados através da mancha do sputum	10	2	12	12
Número de suspeitos avaliados através do raio X	2	1	3	3
Número de suspeitos avaliados através de um outro método	5	4	9	9
Número total de amostras positivas do sputum	6	2	8	8

5. Tempo de entrega até resultado. Peça ver a livro de expectoração/ laboratório. Analise os testes de expectoração durante o período de 3 meses e seleciona o primeiro 5 amostras e recorda a dia recebido e o dia que o resultado foi obtido de cada.

	Data em que a amostra foi recebido	Data em que o resultado foi obtido	Número de dias
Paciente 1	10/14/2009	10/14/2009	0
Paciente 2	10/21/2009	10/21/2009	0
Paciente 3	10/21/2009	10/21/2009	0
Paciente 4	10/26/2009	10/26/2009	0
Paciente 5	10/30/2009	10/30/2009	0

	9		
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6. Taxa de conversão da mancha. Usando o marco temporal de seis meses, verifique o registo da TB para ver se há pacientes manchar-positivos que começaram o tratamento durante este tempo.

	Masculino	Fêmea	Total	Verificação de dados
Número total de pacientes manchar-positivos que começaram o tratamento durante este tempo:	2	3	5	5
Número destes pacientes que eram manchar-negativos após a fase intensiva	2	3	5	5

7. Resultado do tratamento. Usando o um marco temporal do ano, verifique o registo da TB para ver se há o número de pacientes positivos da mancha que começaram o tratamento durante este tempo.

	Masculino	Fêmea	Total	Verificação de dados
Número total de pacientes que começaram o tratamento durante este tempo	5	0	5	5
Número de pacientes com uma mancha negativa para o fim do tratamento (C)	3	0	3	3
Número de pacientes que permaneceram manchar-positivo (POS)	1	0	1	1
Número de pacientes que terminaram a medicação, mas não retornou para o teste final do sputum (TC)	1	0	1	1
Número de pacientes que pararam o tratamento para dois meses ou mais (AB)	0	0	0	0
Número de pacientes que morreram (OB)	0	0	0	0
Número de pacientes que transferiram a uma outra facilidade (T)	0	0	0	0

8. Teste de MDR. Usando o um marco temporal do ano, procure os pacientes manchar-positivos da retirada no início do tratamento, os pacientes que permanecem manchar-positivos após a fase intensiva, ou as falhas do tratamento.

Verific para ver se as amostras dos sputa foram emitidas para o teste da cultura e do suseptability.

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes manchar-positivos da retirada	1	0	1	1
Número de sputa emitiu a Maputo no início do tratamento	0	0	0	0
Número de pacientes manchar-positivos após a fase intensiva	1	0	1	1
Número de sputa emitiu a Maputo após a fase intensiva	0	0	0	0
Número de pacientes que são manchar-positivos após um curso de tratamento cheio	0	0	0	0
Número de sputa emitiu a Maputo após o tratamento cheio	0	0	0	0

9. Gravação e relatório. Cartões de verificação para a integralidade.

	Número de cartões completos	Porcentagem
Quantos cartões uma pessoa de contato alistou?	5	100.0%
Quanto a data do registo e regista o número preencheu?	5	100.0%
Quanto o endereço preencheu?	4	80.0%
Quanto lista a categoria paciente da origem e do paciente?	5	100.0%
Quantos pacientes receberam o teste do sputum?	4	80.0%
Daqueles que receberam o teste, quantos cartões alistam os resultados do sputum?	4	100.0%
Quantos cartões alistam o regime e a dosagem de tratamento?	5	100.0%

Quanto cartões têm a seção da aderência moderna?	4	80.0%
Quanto incluem notas clínicas?	5	100.0%
Quanto daqueles cujo o resultado do tratamento e se descarrega os dados terminaram?	5	100.0%

10. Gerência clínica. Verific cada cartão para ver se o paciente está começ a dosagem correta.

	Número de cartões para este tipo de paciente	Número de cartões terminados corretamente	Número na dosagem correta	A porcentagem dos cartões terminou	Porcentagem na dosagem correta
Pacientes novos	5	5	5	100.0%	100.0%
Pacientes da retirada	0	0	0		
Crianças	0	0	0		

11. Integração de TB-HIV. Peça para ver o registo de HIV/VCT. Olhe os registros no marco temporal de seis meses e verif se os pacientes da TB

estejam oferecidos VCT e se os pacientes seropositivos estão sendo selecionados para a TB.

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes da TB:	11	8	19	19
Número de pacientes da TB consultou para VCT	11	8	19	19
Número dos pacientes igualmente HIV+ da TB	7	2	9	9
Número de pacientes de TB também HIV+ que receberam pelo menos uma dose de TPC	6	2	8	8
Número de pacientes de TB também HIV+ que receberam TARV durante ou depois de tratamento de TB	1	0	1	1
Número de pacientes atuais de HIV+	23	47	70	70
Número de pacientes de HIV+ selecionados para a TB	11	6	17	17
Número de pacientes de HIV+ diagnosticados com TB	6	0	6	6

12. Garantia de qualidade. Verific o registo da qualidade da TB para ver se há slids de amostra dos sputa emitidos a Maputo

para a revisão durante o marco temporal de seis meses.

- Quantas correções foram emitidas? 0
- Quantos erros foram detectados? 0

Porcentagem dos erros
#DIV/0!

● Que é o processo para decidir que correções são emitidas para a revisão de qualidade?

n/a

São as correções escolhidas aleatória ou por um terceiro? \_\_\_\_\_

13. Defesa e materiais do IEC. Verific para ver se há posters e panfletos da TB visíveis e disponíveis aos pacientes.

- Estão os panfletos da TB disponíveis? Não
- Há posters da TB nas paredes? Sim, no português somente

14. Gerência da droga. Peça para ver a farmácia. Verific a fonte de drogas da TB.

Droga	Uma quantidade e disponível 1 (#)	Data de validade válida? (Sim/Não)	Estoque adequado? (Sim/Não)	Cartões conservados em estoque exatos? (Sim/Não)	# das dias sem stock durante trimestr e anterior:
RHZE	3672	Sim	Sim	Sim	0
RH em 2 forças	672	Sim	Sim	Sim	0
EMB	0				
Streptomycin	100	Sim	Sim	Sim	90
RHZ	5000	Sim	Sim	Sim	0
RH para crianças	2000	Sim	Sim	Sim	0

● Há uma programação para requisitar drogas da TB? Sim

Se sim, que é a programação? Mensalm ente

● Que se as drogas funcionam para fora entre programado requisita?

n/a

● Que você nunca não recebido as drogas requisitou?

Não

Se sim, tem como frequentemente isto ocorreu no ano passado? (# de épocas)

Fêz este resultado em você que funciona fora das drogas?

Não

Quanto tempo era você sem medicação? (# de épocas)

15. Fontes de teste. Peça para ver as fontes para coletar, reparar, manchar e ler amostras do sputum.

	Fornece disponível? (Sim/Não)	Se Não, quantos dias foram para fora de estoque?
Frascos da coleção do Sputum	Sim	0
Corrediças	Sim	5
Deslize as tampas	Sim	0
Álcool para a fixação da corrediça	Sim	5
Deslize a mancha.	Sim	0
Microscópio de funcionamento	Sim	0
Outro (Anca)	Sim	0
Outro (Suporte para eloracao de lamínas)	Sim	0
Outro (Papel de filtro)	Sim	0

16. Supervisao comunitaria. Pede o registo de visitas comunitarias.

Quantas visitas de supervisao na comunidade foram feitas nos ultimos 3 meses?

0

Mabalane

Data do exame: 11-Mar-2010

2. Número de membros do pessoal nesta facilidade:

	Masculino	Fêmea	Total	Verificação de dados
Medico	0	1	1	1
Tecnico	1	0	1	1
Enfermeiro	5	4	9	9

2a. A equipe de funcionários treinou na TB

	Masculino	Fêmea	Total	Verificação de dados
Medico	0	1	1	1
Tecnico	1	0	1	1
Enfermeiro	2	0	2	2

2b. Equipe de funcionários da microscopia

	Masculino	Fêmea	Total	Verificação de dados
Número de equipe de funcionários que executa a microscopia nesta facilidade	1	0	1	1

● Pergunte a toda a equipe de funcionários disponível que executa a microscopia, o que era a data de seu/seu último treinamento da microscopia?

Incorpore datas às pilhas individuais	12/31/2009			
Meses desde o último treinamento	2			

3. Verific o registo da TB para ver se há o número total de pacientes atuais da TB (adultos, SS+)

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes da TB:	27	10	37	37
Número de pacientes novos da TB	25	10	35	35
Número de pacientes da retirada	2	0	2	2

Número de pacientes em CB-DOT	26	7	33	33
Número de pacientes no DOT facilidade-baseado	1	3	4	4

● Conte o número de cartões pacientes.

	Total
Número total de cartões pacientes:	37

São o número de cartões pacientes e o número de pacientes no registro o mesmos? Sim

4. Suspeitando a TB. Usando o marco temporal de três meses, verifique o registro do suspeito da TB.

	Masculino	Fêmea	Total	Verificação de dados
Número total de suspeitos da TB registrou durante este tempo	17	7	24	24
Quantos doentes suspeitos foram referidos da comunidade?	10	1	11	11
Número de suspeitos avaliados através da mancha do sputum	5	14	19	19
Número de suspeitos avaliados através do raio X	2	1	3	3
Número de suspeitos avaliados através de um outro método	2	0	2	2
Número total de amostras positivas do sputum	9	4	13	13

5. Tempo de entrega até resultado. Peça ver a livro de expectoração/ laboratório. Analise os testes de expectoração durante o período de 3 meses e selecione o primeiro 5 amostras e registre a data recebido e o dia que o resultado foi obtido de cada.

	Data em que a amostra foi recebido	Data em que o resultado foi obtido	Número de dias
Paciente 1	10/3/2009	10/4/2009	1
Paciente 2	10/8/2009	10/9/2009	1
Paciente 3	10/18/2009	10/19/2009	1
Paciente 4	10/18/2009	10/19/2009	1
Paciente 5	10/22/2009	10/23/2009	1

6. Taxa de conversão da mancha. Usando o marco temporal de seis meses, verifique o registro da TB para ver se há pacientes manchar-positivos que começaram o tratamento durante este tempo.

	Masculino	Fêmea	Total	Verificação de dados
Número total de pacientes manchar-positivos que começaram o tratamento durante este tempo:	19	5	24	24
Número destes pacientes que eram manchar-negativos após a fase intensiva	19	3	22	22

7. Resultado do tratamento. Usando o um marco temporal do ano, verifique o registro da TB para ver se há o número de pacientes positivos da mancha que começaram o tratamento durante este tempo.

	Masculino	Fêmea	Total	Verificação de dados
Número total de pacientes que começaram o tratamento durante este tempo	7	2	9	9
Número de pacientes com uma mancha negativa para o fim do tratamento (C)	6	1	7	7
Número de pacientes que permaneceram manchar-positivo (POS)	0	0	0	0
Número de pacientes que terminaram a medicação, mas não retornou para o teste final do sputum (IC)	0	0	0	0
Número de pacientes que pararam o tratamento para dois meses ou mais (AB)	0	0	0	0
Número de pacientes que morreram (OB)	1	0	1	1
Número de pacientes que transferiram a uma outra facilidade (T)	1	0	1	1

8. Teste de MDR. Usando o um marco temporal do ano, procure os pacientes manchar-positivos da retirada no início do tratamento, os pacientes que permanecem manchar-positivos após a fase intensiva, ou as falhas do tratamento. Verifique para ver se as amostras dos sputa foram emitidas para o teste da cultura e do susceptibilidade.

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes manchar-positivos da retirada	1	1	2	2
Número de sputa emitiu a Maputo no início do tratamento	0	0	0	0
Número de pacientes manchar-positivos após a fase intensiva	0	0	0	0
Número de sputa emitiu a Maputo após a fase intensiva	0	0	0	0
Número de pacientes que são manchar-positivos após um curso de tratamento cheio	0	0	0	0
Número de sputa emitiu a Maputo após o tratamento cheio	0	0	0	0

9. Gravação e relatório. Cartões de verificação para a integralidade.

	Número de cartões completos	Porcentage m
Quantos cartões uma pessoa de contato alistou?	5	100.0%
Quanto a data do registo e regista o número preencheu?	5	100.0%
Quanto o endereço preencheu?	5	100.0%
Quanto lista a categoria paciente da origem e do paciente?	5	100.0%
Quantos pacientes receberam o teste do sputum?	2	40.0%
Daqueles que receberam o teste, quantos cartões alistam os resultados do sputum?	2	100.0%
Quantos cartões alistam o regime e a dosagem de tratamento?	5	100.0%
Quantos cartões têm a seção da aderência moderna?	5	100.0%

Quanto incluem notas clínicas?	5	100.0%
Quanto daqueles cujo o resultado do tratamento e se descarrega os dados terminaram?	5	100.0%

10. Gerência clínica. Verific cada cartão para ver se o paciente está começ a dosagem correta.

	Número de cartões para este tipo de paciente	Número de cartões terminados corretamente	Número na dosagem correta	A porcentagem dos cartões terminou	Porcentagem na dosagem correta
Pacientes novos	4	4	4	100.0%	100.0%
Pacientes da retirada	1	1	1	100.0%	100.0%
Crianças	0	0	0		

11. Integração de TB-HIV. Peça para ver o registo de HIV/VCT. Olhe os registros no marco temporal de seis meses e verifique se os pacientes da TB estejam oferecidos VCT e se os pacientes seropositivos estão sendo selecionados para a TB.

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes da TB:	26	7	33	33
Número de pacientes da TB consultou para VCT	26	7	33	33
Número dos pacientes igualmente HIV+ da TB	9	5	14	14
Número de pacientes de TB também HIV+ que receberam pelo menos uma dose de TPC	9	5	14	14
Número de pacientes de TB também HIV+ que receberam TARV durante ou depois de tratamento de TB	3	2	5	5
Número de pacientes atuais de HIV+	47	145	192	192
Número de pacientes de HIV+ selecionados para a TB	47	145	192	192
Número de pacientes de HIV+ diagnosticados com TB	2	2	4	4

12. Garantia de qualidade. Verific o registo da qualidade da TB para ver se há slides de amostra dos sputa emitidos a Maputo

para a revisão durante o marco temporal de seis meses.

● Quantas correções foram emitidas? 0

● Quantos erros foram detectados? 0

Porcentagem dos erros
#DIV/0!

● Que é o processo para decidir que correções são emitidas para a revisão de qualidade?

n/a

São as correções escolhidas aleatória ou por um terceiro? \_\_\_\_\_

13. Defesa e materiais do IEC. Verific para ver se há posters e panfletos da TB visíveis e disponíveis aos pacientes.

● Estão os panfletos da TB disponíveis? Sim, no português somente

● Há posters da TB nas paredes? Sim, no português somente

14. Gerência da droga. Peça para ver a farmácia. Verific a fonte de drogas da TB.

Droga	Uma quantidade e disponível (#)	Data de validade válida? (Sim/Não)	Estoque adequado? (Sim/Não)	Cartões conservados em estoque exatos? (Sim/Não)	# das dias sem stock durante trimestr e anterior:
RHZE	3360	Sim	Sim	Sim	0
RH em 2 forças	5376	Sim	Sim	Sim	0
EMB	0				
Streptomycin	0				
RHZ	1344	Sim	Sim	Sim	0
RH para crianças	2000	Sim	Sim	Sim	0

● Há uma programação para requisitar drogas da TB? Sim

Se sim, que é a programação? Mensalme nte

● Que se as drogas funcionam para fora entre programado requisita?

Não

● Que você nunca não recebido as drogas requisitou?

Não

Se sim, tem como frequentemente isto ocorreu no ano passado? (# de épocas)

2 vezes

Fêz este resultado em você que funciona fora das drogas?

Não

Quanto tempo era você sem medicação? (# de épocas)

15. Fontes de teste. Peça para ver as fontes para coletar, reparar, manchar e ler amostras do sputum.

	Fornecer disponível ? (Sim/Não)	Se Não, quantos dias foram para fora de estoque?
Frascos da coleção do Sputum	Sim	0
Corrediças	Sim	0
Deslize as tampas	Sim	0
Álcool para a fixação da corrediça	Sim	0
Deslize a mancha.	Sim	0
Microscópio de funcionamento	Sim	0
Outro		
Outro		
Outro		

16. Supervisão comunitaria. Pede o registo de visitas comunitarias.

Quantas visitas de supervisão na comunidade foram feitas nos últimos 3 meses?

1

## Chicualacuala

Data do  
exame: 10-Mar-  
2010

2. Número de membros do pessoal nesta  
facilidade:

	Masculino	Fêmea	Total	Verificação de dados
Medico	0	1	1	1
Tecnico	4	4	8	8
Enfermeiro	3	1	4	4

2a. A equipe de  
funcionários treinou na TB

	Masculino	Fêmea	Total	Verificação de dados
Medico	0	1	1	1
Tecnico	0	0	0	0
Enfermeiro	1	1	2	2

2b. Equipe de  
funcionários da microscopia

	Masculino	Fêmea	Total	Verificação de dados
Número de equipe de funcionários que executa a microscopia nesta facilidade	1	0	1	1

● Pergunte a toda a equipe de funcionários disponível que executa a microscopia, o que era a data de seu/seu último treinamento da microscopia?

Incorpore datas às pilhas individuais	2/28/2009	8/30/2009		
Meses desde o último treinamento	12	6		

3. Verific o registo da TB para ver se há o número total de pacientes atuais da TB (adultos, SS+)

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes da TB:	7	8	15	15
Número de pacientes novos da TB	7	5	12	12
Número de pacientes da retirada	1	0	1	1

Número de pacientes em CB-DOT	1	0	1	1
Número de pacientes no DOT facilidade-baseado	6	8	14	14

● Conte o número de cartões pacientes.

	Total
Número total de cartões pacientes:	15

São o número de cartões pacientes e o número de pacientes no registro o mesmos? Sim

4. Suspeitando a TB. Usando o marco temporal de três meses, verifique o registro do suspeito da TB.

	Masculino	Fêmea	Total	Verificação de dados
Número total de suspeitos da TB registrou durante este tempo	8	6	14	14
Quantos doentes suspeitos foram referidos da comunidade?	0	0	0	0
Número de suspeitos avaliados através da mancha do sputum	8	5	13	13
Número de suspeitos avaliados através do raio X	0	0	0	0
Número de suspeitos avaliados através de um outro método	1	0	1	1
Número total de amostras positivas do sputum	6	4	10	10

5. Tempo de entrega até resultado. Peça ver a livro de expectoração/ laboratório. Analise os testes de expectoração durante o período de 3 meses e selecione o primeiro 5 amostras e registre a data recebido e o dia que o resultado foi obtido de cada.

	Data em que a amostra foi recebido	Data em que o resultado foi obtido	Número de dias
Paciente 1	10/8/2009	10/9/2009	1
Paciente 2	10/26/2009	10/27/2009	1
Paciente 3	12/11/2009	12/12/2009	1
Paciente 4	12/24/2009	12/25/2009	1
Paciente 5	12/30/2009	1/2/2010	3

6. Taxa de conversão da mancha. Usando o marco temporal de seis meses, verifique o registro da TB para ver se há pacientes manchar-positivos que começaram o tratamento durante este tempo.

	Masculino	Fêmea	Total	Verificação de dados
Número total de pacientes manchar-positivos que começaram o tratamento durante este tempo:	10	10	20	20
Número destes pacientes que eram manchar-negativos após a fase intensiva	10	8	18	18

7. Resultado do tratamento. Usando o um marco temporal do ano, verifique o registro da TB para ver se há o número de pacientes positivos da mancha que começaram o tratamento durante este tempo.

	Masculino	Fêmea	Total	Verificação de dados
Número total de pacientes que começaram o tratamento durante este tempo	9	5	14	14
Número de pacientes com uma mancha negativa para o fim do tratamento (C)	7	2	9	9
Número de pacientes que permaneceram manchar-positivo (POS)				0
Número de pacientes que terminaram a medicação, mas não retornou para o teste final do sputum (TC)				0
Número de pacientes que pararam o tratamento para dois meses ou mais (AB)	1	0	1	1
Número de pacientes que morreram (OB)	0	2	2	2
Número de pacientes que transferiram a uma outra facilidade (T)	1	1	2	2

8. Teste de MDR. Usando o um marco temporal do ano, procure os pacientes manchar-positivos da retirada no início do tratamento, os pacientes que permanecem manchar-positivos após a fase

intensiva, ou as falhas do tratamento.

Verific para ver se as amostras dos sputa foram emitidas para o teste da cultura e do suseptability.

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes manchar-positivos da retirada	0	1	1	1
Número de sputa emitiu a Maputo no início do tratamento	0	0	0	0
Número de pacientes manchar-positivos após a fase intensiva	1	0	1	1
Número de sputa emitiu a Maputo após a fase intensiva	0	0	0	0
Número de pacientes que são manchar-positivos após um curso de tratamento cheio	0	0	0	0
Número de sputa emitiu a Maputo após o tratamento cheio	0	0	0	0

9. Gravação e relatório. Cartões de verificação para a integralidade.

	Número de cartões completos	Porcentage m
Quantos cartões uma pessoa de contato alistou?	4	80.0%
Quanto a data do registo e regista o número preencheu?	5	100.0%
Quanto o endereço preencheu?	5	100.0%
Quanto lista a categoria paciente da origem e do paciente?	5	100.0%
Quantos pacientes receberam o teste do sputum?	4	80.0%
Daqueles que receberam o teste, quantos cartões alistam os resultados do sputum?	4	100.0%

Quanto cartões alistem o regime e a dosagem de tratamento?	5	100.0%
Quanto cartões têm a seção da aderência moderna?	5	100.0%
Quanto incluem notas clínicas?	5	100.0%
Quanto daqueles cujo o resultado do tratamento e se descarrega os dados terminaram?	5	100.0%

10. Gerência clínica. Verific cada cartão para ver se o paciente está começ a dosagem correta.

	Número de cartões para este tipo de paciente	Número de cartões terminados corretamente	Número na dosagem correta	A porcentagem dos cartões terminou	Porcentagem na dosagem correta
Pacientes novos	3	3	3	100.0%	100.0%
Pacientes da retirada	1	1	1	100.0%	100.0%
Crianças	1	1	1	100.0%	100.0%

11. Integração de TB-HIV. Peça para ver o registo de HIV/VCT. Olhe os registros no marco temporal de seis meses e verifique se os pacientes da TB estejam oferecidos VCT e se os pacientes seropositivos estão sendo selecionados para a TB.

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes da TB:	12	10	22	22
Número de pacientes da TB consultou para VCT	12	10	22	22
Número dos pacientes igualmente HIV+ da TB	10	8	18	18
Número de pacientes de TB também HIV+ que receberam pelo menos uma dose de TPC	10	8	18	18
Número de pacientes de TB também HIV+ que receberam TARV durante ou depois de tratamento de TB	4	2	6	6
Número de pacientes atuais de HIV+	33	97	130	130
Número de pacientes de HIV+ selecionados para a TB	12	27	39	39

Número de pacientes de HIV+ diagnosticados com TB	0	1	1	1
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12. Garantia de qualidade. Verific o registro da qualidade da TB para ver se há slids de amostra dos sputa emitidos a Maputo para a revisão durante o marco temporal de seis meses.

● Quantas correções foram emitidas? 0

● Quantos erros foram detectados? 0

Porcentagem dos erros
#DIV/0!

● Que é o processo para decidir que correções são emitidas para a revisão de qualidade?

n/a

São as correções escolhidas aleatória ou por um terceiro? \_\_\_\_\_

13. Defesa e materiais do IEC. Verific para ver se há posters e panfletos da TB visíveis e disponíveis aos pacientes.

● Estão os panfletos da TB disponíveis? Sim, no português somente

● Há posters da TB nas paredes? Sim, no português somente

14. Gerência da droga. Peça para ver a farmácia. Verific a fonte de drogas da TB.

Droga	Uma quantidade e disponível (#)	Data de validade válida? (Sim/Não)	Estoque adequado? (Sim/Não)	Cartões conservados em estoque exatos? (Sim/Não)	# das dias sem stock durante trimestr e anterior :
RHZE	2152	Sim	Sim	Sim	0
RH em 2 forças	0		Não	Sim	30
EMB					
Streptomycin	0		Não	Não	60
RHZ	2304	Sim	Sim	Sim	0
RH para crianças	0		Não	Não	30

● Há uma programação para requisitar drogas da TB? Sim

Se sim, que é a programação? Mensalmente

● Que se as drogas funcionam para fora entre programado requisita? Sim?

● Que você nunca não recebido as drogas requisitou? Sim

Se sim, tem como frequentemente isto ocorreu no ano passado? (# de épocas) 1

Fêz este resultado em você que funciona fora das drogas? Sim

Quanto tempo era você sem medicação? (# de épocas) 30

15. Fontes de teste. Peça para ver as fontes para coletar, reparar, manchar e ler amostras do sputum.

	Fornece disponível? (Sim/Não)	Se Não, quantos dias foram para fora - de - estoque?
Frascos da coleção do Sputum	Sim	
Corrediças	Sim	
Deslize as tampas	Sim	
Álcool para a fixação da corrediça	Sim	
Deslize a mancha.	Sim	
Microscópio de funcionamento	Sim	
Outro (A. Sulfurico)	Sim	
Outro (oleo meses?)	Sim	
Outro		

16. Supervisao comunitaria. Pede o registo de visitas comunitarias.

Quantas visitas de supervisao na comunidade foram feitas nos ultimos 3 meses? 1

Massangena

Data do exame: 10-Mar-2010

2. Número de membros do pessoal nesta facilidade:

	Masculino	Fêmea	Total	Verificação de dados
Medico	0	1	1	1
Tecnico	3	2	5	5
Enfermeiro	3	4	7	7

2a. A equipe de funcionários treinou na TB

	Masculino	Fêmea	Total	Verificação de dados
Medico	0	0	0	0
Tecnico	1	0	1	1
Enfermeiro	0	1	1	1

2b. Equipe de funcionários da microscopia

	Masculino	Fêmea	Total	Verificação de dados
Número de equipe de funcionários que executa a microscopia nesta facilidade	1	0	1	1

● Pergunte a toda a equipe de funcionários disponível que executa a microscopia, o que era a data de seu/seu último treinamento da microscopia?

Incorpore datas às pilhas individuais				
Meses desde o último treinamento				

3. Verific o registo da TB para ver se há o número total de pacientes atuais da TB (adultos, SS+)

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes da TB:	5	4	9	9
Número de pacientes novos da TB	4	2	6	6
Número de pacientes da retirada	2	0	2	2

Número de pacientes em CB-DOT	0	1	1	1
Número de pacientes no DOT facilidade-baseado	5	3	8	8

● Conte o número de cartões pacientes.

	Total
Número total de cartões pacientes:	9

São o número de cartões pacientes e o número de pacientes no registro o mesmos? Sim

4. Suspeitando a TB. Usando o marco temporal de três meses, verifique o registo do suspeito da TB.

	Masculino	Fêmea	Total	Verificação de dados
Número total de suspeitos da TB registou durante este tempo	11	3	14	14
Quantos doentes suspeitos foram referidos da comunidade?	1	0	1	1
Número de suspeitos avaliados através da mancha do sputum	10	3	13	13
Número de suspeitos avaliados através do raio X	0	0	0	0
Número de suspeitos avaliados através de um outro método	0	1	1	1
Número total de amostras positivas do sputum	4	1	5	5

5. Tempo de entrega até resultado. Peça ver a livro de expectoração/ laboratório. Analise os testes de expectoração durante o período de 3 meses e selecione o primeiro 5 amostras e recorde a data recebido e o dia que o resultado foi obtido de cada.

	Data em que a amostra foi recebido	Data em que o resultado foi obtido	Número de dias
Paciente 1	10/6/2009	10/6/2009	0
Paciente 2	10/7/2009	10/7/2009	0
Paciente 3	10/8/2009	10/8/2009	0
Paciente 4	10/15/2009	10/15/2009	0
Paciente 5	10/19/2009	10/19/2009	0

6. Taxa de conversão da mancha. Usando o marco temporal de seis meses, verifique o registo da TB para ver se há pacientes manchar-positivos que começaram o tratamento durante este tempo.

	Masculino	Fêmea	Total	Verificação de dados
Número total de pacientes manchar-positivos que começaram o tratamento durante este tempo:	4	1	5	5
Número destes pacientes que eram manchar-negativos após a fase intensiva	4	1	5	5

7. Resultado do tratamento. Usando o um marco temporal do ano, verifique o registo da TB para ver se há o número de pacientes positivos da mancha que começaram o tratamento durante este tempo.

	Masculino	Fêmea	Total	Verificação de dados
Número total de pacientes que começaram o tratamento durante este tempo	3	4	7	7
Número de pacientes com uma mancha negativa para o fim do tratamento (C)	2	3	5	5
Número de pacientes que permaneceram manchar-positivo (POS)	0	0	0	0
Número de pacientes que terminaram a medicação, mas não retornou para o teste final do sputum (TC)	0	0	0	0
Número de pacientes que pararam o tratamento para dois meses ou mais (AB)	0	0	0	0
Número de pacientes que morreram (OB)	1	1	2	2
Número de pacientes que transferiram a uma outra facilidade (T)	0	0	0	0

8. Teste de MDR. Usando o um marco temporal do ano, procure os pacientes manchar-positivos da retirada no início do tratamento,

os pacientes que permanecem manchar-positivos após a fase intensiva, ou as falhas do tratamento.

Verific para ver se as amostras dos sputa foram emitidas para o teste da cultura e do suseptability.

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes manchar-positivos da retirada	0	0	0	0
Número de sputa emitiu a Maputo no início do tratamento	0	0	0	0
Número de pacientes manchar-positivos após a fase intensiva	1	0	1	1
Número de sputa emitiu a Maputo após a fase intensiva	0	0	0	0
Número de pacientes que são manchar-positivos após um curso de tratamento cheio	0	0	0	0
Número de sputa emitiu a Maputo após o tratamento cheio	0	0	0	0

9. Gravação e relatório. Cartões de verificação para a integralidade.

	Número de cartões completos	Porcentage m
Quantos cartões uma pessoa de contato alistou?	4	80.0%
Quanto a data do registo e regista o número preencheu?	5	100.0%
Quanto o endereço preencheu?	5	100.0%
Quanto lista a categoria paciente da origem e do paciente?	5	100.0%
Quantos pacientes receberam o teste do sputum?	5	100.0%
Daqueles que receberam o teste, quantos cartões alistam os resultados do sputum?	5	100.0%

Quanto cartões alistam o regime e a dosagem de tratamento?	5	100.0%
Quanto cartões têm a seção da aderência moderna?	5	100.0%
Quanto incluem notas clínicas?	5	100.0%
Quanto daqueles cujo resultado do tratamento e se descarrega os dados terminaram?	5	100.0%

10. Gerência clínica. Verific cada cartão para ver se o paciente está começando a dosagem correta.

	Número de cartões para este tipo de paciente	Número de cartões terminados corretamente	Número na dosagem correta	A porcentagem dos cartões terminou	Porcentagem na dosagem correta
Pacientes novos	4	3	4	75.0%	100.0%
Pacientes da retirada	1	1	1	100.0%	100.0%
Crianças	0	0	0		

11. Integração de TB-HIV. Peça para ver o registro de HIV/VCT. Olhe os registros no marco temporal de seis meses e verifique se os pacientes da TB estejam oferecidos VCT e se os pacientes seropositivos estão sendo selecionados para a TB.

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes da TB:	12	5	17	17
Número de pacientes da TB consultou para VCT	12	5	17	17
Número dos pacientes igualmente HIV+ da TB	8	4	12	12
Número de pacientes de TB também HIV+ que receberam pelo menos uma dose de TPC	8	4	12	12
Número de pacientes de TB também HIV+ que receberam TARV durante ou depois de tratamento de TB	1	0	1	1
Número de pacientes atuais de HIV+	38	86	124	124
Número de pacientes de HIV+ selecionados para a TB	26	43	69	69

Número de pacientes de HIV+ diagnosticados com TB	3	2	5	5
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12. Garantia de qualidade. Verific o registro da qualidade da TB para ver se há slids de amostra dos sputa emitidos a Maputo para a revisão durante o marco temporal de seis meses.

● Quantas correções foram emitidas?	20	Porcentagem dos erros 0.0%
● Quantos erros foram detectados?	0	

● Que é o processo para decidir que correções são emitidas para a revisão de qualidade?

Proprio tecnico selecciona segundo a duxido que texe na leitura

São as correções escolhidas aleatória ou por um terceiro? \_\_\_\_\_

13. Defesa e materiais do IEC. Verific para ver se há posteres e panfletos da TB visíveis e disponíveis aos pacientes.

● Estão os panfletos da TB disponíveis?	<u>Sim, no português somente</u>
● Há posteres da TB nas paredes?	<u>Sim, no português somente</u>

14. Gerência da droga. Peça para ver a farmácia. Verific a fonte de drogas da TB.

Droga	Uma quantidade disponível (#)	Data de validade válida? (Sim/Não)	Estoque adequado? (Sim/Não)	Cartões conservados em estoque exatos? (Sim/Não)	# das dias sem stock durante trimestr e anterior:
RHZE	6000	Sim	Sim	Sim	0
RH em 2 forças	216	Sim	Sim	Sim	
EMB					
Streptomycin	180	Sim	Sim	Sim	0
RHZ	1100	Sim	Sim	Sim	0
RH para crianças	10000	Sim	Sim	Sim	0

● Há uma programação para requisitar Sim

drogas da TB? \_\_\_\_\_

Se sim, que é a  
programação?

Mensalmen  
te \_\_\_\_\_

● Que se as drogas funcionam para fora entre  
programado requisita?

Nao \_\_\_\_\_

● Que você nunca não recebido as  
drogas requisitou?

Não \_\_\_\_\_

Se sim, tem como frequentemente isto ocorreu no  
ano passado? (# de épocas)

Fêz este resultado em você que  
funciona fora das drogas?

Nenhuma resposta \_\_\_\_\_

Quanto tempo era você sem  
medicamentação? (# de épocas)

15. Fontes de teste. Peça para ver as fontes para coletar, reparar, manchar  
e ler amostras do sputum.

	Fornece disponível? (Sim/Não)	Se Nã, quantos dias foram para fora - de - estoque?
Frascos da coleção do Sputum	Sim	7
Corrediças	Sim	
Deslize as tampas	Sim	
Álcool para a fixação da corrediça	Sim	
Deslize a mancha.	Sim	
Microscópio de funcionamento	Sim	
Outro (Lamparina)	Sim	
Outro (A. Sulfurico)	Sim	
Outro (Porta-Lamina)	Sim	

16. Supervisão comunitaria. Pede o registo de  
visitas comunitarias.

Quantas visitas de supervisao na comunidade foram feitas  
nos ultimos 3 meses?

2 \_\_\_\_\_

## Chigubu/ Nhanale

Data do exame: 12-Mar-2010

2. Número de membros do pessoal nesta facilidade:

	Masculino	Fêmea	Total	Verificação de dados
Medico	0	1	1	1
Tecnico	1	1	2	2
Enfermeiro	2	2	4	4

2a. A equipe de funcionários treinou na TB

	Masculino	Fêmea	Total	Verificação de dados
Medico	0	1	1	1
Tecnico	1	1	2	2
Enfermeiro	1	0	1	1

2b. Equipe de funcionários da microscopia

	Masculino	Fêmea	Total	Verificação de dados
Número de equipe de funcionários que executa a microscopia nesta facilidade	1	1	2	2

● Pergunte a toda a equipe de funcionários disponível que executa a microscopia, o que era a data de seu/seu último treinamento da microscopia?

Incorpore datas às pilhas individuais	11/30/2009			
Meses desde o último treinamento	3			

3. Verific o registo da TB para ver se há o número total de pacientes atuais da TB (adultos, SS+)

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes da TB:	9	8	17	17
Número de pacientes novos da TB	9	8	17	17
Número de pacientes da retirada	0	0	0	0

Número de pacientes em CB-DOT	2	1	3	3
Número de pacientes no DOT facilidade-baseado	7	7	14	14

● Conte o número de cartões pacientes.

	Total
Número total de cartões pacientes:	17

São o número de cartões pacientes e o número de pacientes no registro o mesmos? Sim

4. Suspeitando a TB. Usando o marco temporal de três meses, verifique o registro do suspeito da TB.

	Masculino	Fêmea	Total	Verificação de dados
Número total de suspeitos da TB registou durante este tempo	5	5	10	10
Quantos doentes suspeitos foram referidos da comunidade?	0	0	0	0
Número de suspeitos avaliados através da mancha do sputum	5	5	10	10
Número de suspeitos avaliados através do raio X	0	0	0	0
Número de suspeitos avaliados através de um outro método	1	1	2	2
Número total de amostras positivas do sputum	4	4	8	8

5. Tempo de entrega até resultado. Peça ver a livro de expectoração/ laboratório. Analise os testes de expectoração durante o período de 3 meses e seleciona o primeiro 5 amostras e recorda a dia recebido e o dia que o resultado foi obtido de cada.

	Data em que a amostra foi recebido	Data em que o resultado foi obtido	Número de dias
Paciente 1	10/6/2009	10/6/2009	0
Paciente 2	10/6/2009	10/6/2009	0
Paciente 3	10/15/2009	10/15/2009	0
Paciente 4	10/19/2009	10/19/2009	0
Paciente 5	12/3/2009	12/3/2009	0

6. Taxa de conversão da mancha. Usando o marco temporal de seis meses, verifique o registro da TB para ver se há pacientes manchar-positivos que começaram o tratamento durante este tempo.

	Masculino	Fêmea	Total	Verificação de dados
Número total de pacientes manchar-positivos que começaram o tratamento durante este tempo:	7	9	16	16
Número destes pacientes que eram manchar-negativos após a fase intensiva	3	8	11	11

7. Resultado do tratamento. Usando o um marco temporal do ano, verifique o registro da TB para ver se há o número de pacientes positivos da mancha que começaram o tratamento durante este tempo.

	Masculino	Fêmea	Total	Verificação de dados
Número total de pacientes que começaram o tratamento durante este tempo	3	0	3	3
Número de pacientes com uma mancha negativa para o fim do tratamento (C )	2	0	2	2
Número de pacientes que permaneceram manchar-positivo (POS)	0	0	0	0
Número de pacientes que terminaram a medicação, mas não retornou para o teste final do sputum (TC)	0	0	0	0
Número de pacientes que pararam o tratamento para dois meses ou mais (AB)	0	0	0	0
Número de pacientes que morreram (OB)	1	0	1	1
Número de pacientes que transferiram a uma outra facilidade (T)	0	0	0	0

8. Teste de MDR. Usando o um marco temporal do ano, procure os pacientes manchar-positivos da retirada no início do tratamento, os pacientes que permanecem manchar-positivos após a fase intensiva, ou as falhas do tratamento. Verifique para ver se as amostras dos sputa foram emitidas para o teste da cultura e do susceptibilidade.

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes manchar-positivos da retirada	1	0	1	1
Número de sputa emitiu a Maputo no início do tratamento	1	0	1	1
Número de pacientes manchar-positivos após a fase intensiva	1	0	1	1
Número de sputa emitiu a Maputo após a fase intensiva	1	0	1	1
Número de pacientes que são manchar-positivos após um curso de tratamento cheio	0	0	0	0
Número de sputa emitiu a Maputo após o tratamento cheio	0	0	0	0

9. Gravação e relatório. Cartões de verificação para a integralidade.

	Número de cartões completos	Percentage m
Quanto cartões uma pessoa de contato alistou?	4	80.0%
Quanto a data do registo e regista o número preencheu?	5	100.0%
Quanto o endereço preencheu?	5	100.0%
Quanto lista a categoria paciente da origem e do paciente?	5	100.0%
Quanto pacientes receberam o teste do sputum?	4	80.0%
Daqueles que receberam o teste, quanto cartões alistam os resultados do sputum?	4	100.0%
Quanto cartões alistam o regime e a dosagem de tratamento?	5	100.0%
Quanto cartões têm a seção da aderência moderna?	2	40.0%

Quanto incluem notas clínicas?	5	100.0%
Quanto daqueles cujo o resultado do tratamento e se descarrega os dados terminaram?	5	100.0%

10. Gerência clínica. Verific cada cartão para ver se o paciente está começ a dosagem correta.

	Número de cartões para este tipo de paciente	Número de cartões terminados corretamente	Número na dosagem correta	A porcentagem dos cartões terminou	Porcentagem na dosagem correta
Pacientes novos	4	4	4	100.0%	100.0%
Pacientes da retirada	1	1	1	100.0%	100.0%
Crianças	0	0	0		

11. Integração de TB-HIV. Peça para ver o registo de HIV/VCT. Olhe os registros no marco temporal de seis meses e verifique se os pacientes da TB estejam oferecidos VCT e se os pacientes seropositivos estão sendo selecionados para a TB.

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes da TB:	6	11	17	17
Número de pacientes da TB consultou para VCT	6	11	17	17
Número dos pacientes igualmente HIV+ da TB	4	5	9	9
Número de pacientes de TB também HIV+ que receberam pelo menos uma dose de TPC	4	5	9	9
Número de pacientes de TB também HIV+ que receberam TARV durante ou depois de tratamento de TB	3	1	4	4
Número de pacientes atuais de HIV+	9	27	36	36
Número de pacientes de HIV+ selecionados para a TB	11	24	35	35
Número de pacientes de HIV+ diagnosticados com TB	2	2	4	4

12. Garantia de qualidade. Verific o registo da qualidade da TB para ver se há slides de amostra dos sputa emitidos a Maputo



● Que se as drogas funcionam para fora entre programado requisita?

Não

● Que você nunca não recebido as drogas requisitou?

Não

Se sim, tem como frequentemente isto ocorreu no ano passado? (# de épocas)

Fêz este resultado em você que funciona fora das drogas?

Não

Quanto tempo era você sem medicação? (# de épocas)

15. Fontes de teste. Peça para ver as fontes para coletar, reparar, manchar e ler amostras do sputum.

	Fornecer disponível ? (Sim/Não)	Se Não, quantos dias foram para fora de estoque?
Frascos da coleção do Sputum	Sim	7
Corrediças	Sim	0
Deslize as tampas	Sim	0
Álcool para a fixação da corrediça	Sim	0
Deslize a mancha.	Sim	0
Microscópio de funcionamento	Sim	0
Outro (Ac. Sulfurico)	Sim	21
Outro		
Outro		

16. Supervisão comunitaria. Pede o registo de visitas comunitarias.

Quantas visitas de supervisão na comunidade foram feitas nos últimos 3 meses?

1

Chokwe

Data do exame: 27-Abr-2010

2. Número de membros do pessoal nesta facilidade:

	Masculino	Fêmea	Total	Verificação de dados
Medico	0	3	3	3
Tecnico	1	2	3	3
Enfermeiro	0	8	8	8

2a. A equipe de funcionários treinou na TB

	Masculino	Fêmea	Total	Verificação de dados
Medico	0	3	3	3
Tecnico	0	2	2	2
Enfermeiro	0	8	8	8

2b. Equipe de funcionários da microscopia

	Masculino	Fêmea	Total	Verificação de dados
Número de equipe de funcionários que executa a microscopia nesta facilidade	3	1	4	4

● Pergunte a toda a equipe de funcionários disponível que executa a microscopia, o que era a data de seu/seu último treinamento da microscopia?

Incorpore datas às pilhas individuais	10/31/2006	9/30/2009		
Meses desde o último treinamento	41	6		

3. Verific o registo da TB para ver se há o número total de pacientes atuais da TB (adultos, SS+)

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes da TB:	61	45	106	106
Número de pacientes novos da TB	50	40	90	90
Número de pacientes da retirada	11	5	16	16

Número de pacientes em CB-DOT	37	25	62	62
Número de pacientes no DOT facilidade-baseado	24	20	44	44

● Conte o número de cartões pacientes.

	Total
Número total de cartões pacientes:	106

São o número de cartões pacientes e o número de pacientes no registro o mesmos? Sim

4. Suspeitando a TB. Usando o marco temporal de três meses, verifique o registo do suspeito da TB.

	Masculino	Fêmea	Total	Verificação de dados
Número total de suspeitos da TB registou durante este tempo	127	89	216	216
Quantos doentes suspeitos foram referidos da comunidade?	0	0	0	
Número de suspeitos avaliados através da mancha do sputum	99	64	163	163
Número de suspeitos avaliados através do raio X	10	6	16	16
Número de suspeitos avaliados através de um outro método	18	19	37	37
Número total de amostras positivas do sputum	48	30	78	78

5. Tempo de entrega até resultado. Peça ver a livro de expectoração/ laboratório. Analise os testes de expectoração durante o período de 3 meses e seleciona o primeiro 5 amostras e recorda a dia recebido e o dia que o resultado foi obtido de cada.

	Data em que a amostra foi recebido	Data em que o resultado foi obtido	Número de dias
Paciente 1	1/10/2009	1/10/2009	0
Paciente 2	2/10/2009	2/10/2009	0
Paciente 3	6/10/2009	6/10/2009	0
Paciente 4	7/10/2009	7/10/2009	0
Paciente 5	8/10/2009	8/10/2009	0

6. Taxa de conversão da mancha. Usando o marco temporal de seis meses, verifique o registro da TB para ver se há pacientes manchar-positivos que começaram o tratamento durante este tempo.

	Masculino	Fêmea	Total	Verificação de dados
Número total de pacientes manchar-positivos que começaram o tratamento durante este tempo:	45	23	68	68
Número destes pacientes que eram manchar-negativos após a fase intensiva	29	19	48	48

7. Resultado do tratamento. Usando o um marco temporal do ano, verifique o registro da TB para ver se há o número de pacientes positivos da mancha que começaram o tratamento durante este tempo.

	Masculino	Fêmea	Total	Verificação de dados
Número total de pacientes que começaram o tratamento durante este tempo	34	32	66	66
Número de pacientes com uma mancha negativa para o fim do tratamento (C)	24	26	50	50
Número de pacientes que permaneceram manchar-positivo (POS)	1	1	2	2
Número de pacientes que terminaram a medicação, mas não retornou para o teste final do sputum (TC)	0	0	0	
Número de pacientes que pararam o tratamento para dois meses ou mais (AB)	2	1	3	3
Número de pacientes que morreram (OB)	7	4	11	11
Número de pacientes que transferiram a uma outra facilidade (T)	0	0	0	

8. Teste de MDR. Usando o um marco temporal do ano, procure os pacientes manchar-positivos da retirada no início do tratamento, os pacientes que permanecem manchar-positivos após a fase intensiva, ou as falhas do tratamento. Verifique para ver se as amostras dos sputa foram emitidas para o teste da cultura e do susceptibilidade.

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes manchar-positivos da retirada	2	3	5	5
Número de sputa emitiu a Maputo no início do tratamento	2	3	5	5
Número de pacientes manchar-positivos após a fase intensiva	1	0	1	1
Número de sputa emitiu a Maputo após a fase intensiva	1	0	1	1
Número de pacientes que são manchar-positivos após um curso de tratamento cheio	1	0	1	1
Número de sputa emitiu a Maputo após o tratamento cheio	1	0	1	1

9. Gravação e relatório. Cartões de verificação para a integralidade.

	Número de cartões completos	Porcentagem
Quantos cartões uma pessoa de contato alistou?	8	80.0%
Quanto a data do registo e regista o número preencheu?	10	100.0%
Quanto o endereço preencheu?	8	80.0%
Quanto lista a categoria paciente da origem e do paciente?	10	100.0%
Quantos pacientes receberam o teste do sputum?	7	70.0%
Daqueles que receberam o teste, quantos cartões alistam os resultados do sputum?	7	100.0%
Quantos cartões alistam o regime e a dosagem de tratamento?	10	100.0%

Quanto cartões têm a seção da aderência moderna?	10	100.0%
Quanto incluem notas clínicas?	10	100.0%
Quanto daqueles cujo o resultado do tratamento e se descarrega os dados terminaram?	10	100.0%

10. Gerência clínica. Verific cada cartão para ver se o paciente está começ a dosagem correta.

	Número de cartões para este tipo de paciente	Número de cartões terminados corretamente	Número na dosagem correta	A porcentagem dos cartões terminou	Porcentagem na dosagem correta
Pacientes novos	7	7	7	100.0%	100.0%
Pacientes da retirada	1	1	1	100.0%	100.0%
Crianças	2	2	2	100.0%	100.0%

11. Integração de TB-HIV. Peça para ver o registro de HIV/VCT. Olhe os registros no marco temporal de seis meses e verifique se os pacientes da TB estejam oferecidos VCT e se os pacientes seropositivos estão sendo selecionados para a TB.

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes da TB:	132	92	224	224
Número de pacientes da TB consultou para VCT	132	92	224	224
Número dos pacientes igualmente HIV+ da TB	106	83	189	189
Número de pacientes de TB também HIV+ que receberam pelo menos uma dose de TPC	106	83	189	189
Número de pacientes de TB também HIV+ que receberam TARV durante ou depois de tratamento de TB	70	61	131	131
Número de pacientes atuais de HIV+	177	245	422	422
Número de pacientes de HIV+ selecionados para a TB	186	201	387	387
Número de pacientes de HIV+ diagnosticados com TB	78	70	148	148

12. Garantia de qualidade. Verific o registro da qualidade da TB para ver se há slids de amostra dos sputa emitidos a Maputo para a revisão durante o marco temporal de seis meses.

● Quantas correções foram emitidas?	<u>10</u>	Porcentagem dos erros
● Quantos erros foram detectados?	<u>0</u>	

● Que é o processo para decidir que correções são emitidas para a revisão de qualidade?

Proprio chefe do sector seleciona de acordo com numero de cruces

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São as correções escolhidas aleatória ou por um terceiro? \_\_\_\_\_

13. Defesa e materiais do IEC. Verific para ver se há posteres e panfletos da TB visíveis e disponíveis aos pacientes.

● Estão os panfletos da TB disponíveis?	<u>Sim, no português somente</u>
● Há posteres da TB nas paredes?	<u>Não</u>

14. Gerência da droga. Peça para ver a farmácia. Verific a fonte de drogas da TB.

Droga	Uma quantidade de disponível I (#)	Data de validade válida? (Sim/Não)	Estoque adequado? (Sim/Não)	Cartões conservados em estoque exatos? (Sim/Não)	# das dias sem stock durante trimestr e anterior :
RHZE	576	Sim	Sim	Sim	
RH em 2 forças	1464	Sim	Sim	Sim	
EMB	7000	Sim	Sim	Sim	
Streptomycin	200	Sim	Sim	Sim	
RHZ	437	Sim	Sim	Sim	
RH para crianças	9540	Sim	Sim	Sim	

● Há uma programação para requisitar drogas da TB? Sim

Se sim, que é a programação?

Mensal

● Que se as drogas funcionam para fora entre programado requisita?

Não

● Que você nunca não recebido as drogas requisitou?

Sim

Se sim, tem como frequentemente isto ocorreu no ano passado? (# de épocas)

1

Fêz este resultado em você que funciona fora das drogas?

Não

Quanto tempo era você sem medicação? (# de épocas)

30

15. Fontes de teste. Peça para ver as fontes para coletar, reparar, manchar e ler amostras do sputum.

	Fornecer disponível? (Sim/Não)	Se Não, quantos dias foram para fora de estoque?
Frascos da coleção do Sputum	Sim	
Corrediças	Sim	
Deslize as tampas	Sim	
Álcool para a fixação da corrediça	Não	30
Deslize a mancha.	Sim	
Microscópio de funcionamento	Sim	
Outro: papel de lentes	Não	60
Outro: Cronometro	Não	30
Outro: Suporte de lamina	Não	60

16. Supervisão comunitaria. Pede o registro de visitas comunitarias.

Quantas visitas de supervisão na comunidade foram feitas nos últimos 3 meses?

1

Macia  
Data do  
exame: 3-Mai-  
2010

2. Número de membros do pessoal nesta  
facilidade:

	Masculino	Fêmea	Total	Verificação de dados
Medico	1	0	1	1
Tecnico	3	1	4	4
Enfermeiro	2	8	10	10

2a. A equipe de  
funcionários treinou na TB

	Masculino	Fêmea	Total	Verificação de dados
Medico	1	0	1	1
Tecnico	1	0	1	1
Enfermeiro	2	0	2	2

2b. Equipe de  
funcionários da microscopia

	Masculino	Fêmea	Total	Verificação de dados
Número de equipe de funcionários que executa a microscopia nesta facilidade	2	1	3	3

● Pergunte a toda a equipe de funcionários disponível que executa a microscopia, o que era a data de seu/seu último treinamento da microscopia?

Incorpore datas às pilhas individuais	11/30/2006	11/30/2009	10/31/2009	9
Meses desde o último treinamento	41	5	6	

3. Verific o registo da TB para ver se há o número total de pacientes atuais da TB (adultos, SS+)

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes da TB:	60	52	112	112
Número de pacientes novos da TB	58	47	105	105
Número de pacientes da retirada	2	5	7	7

Número de pacientes em CB-DOT	0	0	0	
Número de pacientes no DOT facilidade-baseado	60	52	112	112

● Conte o número de cartões pacientes.

	Total
Número total de cartões pacientes:	112

São o número de cartões pacientes e o número de pacientes no registro o mesmos? Sim

4. Suspeitando a TB. Usando o marco temporal de três meses, verifique o registro do suspeito da TB.

	Masculino	Fêmea	Total	Verificação de dados
Número total de suspeitos da TB registou durante este tempo	64	39	103	103
Quantos doentes suspeitos foram referidos da comunidade?	0	0	0	
Número de suspeitos avaliados através da mancha do sputum	60	38	98	98
Número de suspeitos avaliados através do raio X	0	0	0	
Número de suspeitos avaliados através de um outro método	4	1	5	5
Número total de amostras positivas do sputum	33	26	59	59

5. Tempo de entrega até resultado. Peça ver a livro de expectoração/ laboratório. Analise os testes de expectoração durante o período de 3 meses e selecione o primeiro 5 amostras e registre a data recebido e o dia que o resultado foi obtido de cada.

	Data em que a amostra foi recebido	Data em que o resultado foi obtido	Número de dias
Paciente 1	10/1/2009	10/1/2009	0
Paciente 2	10/12/2009	10/12/2009	0
Paciente 3	10/16/2009	10/16/2009	0
Paciente 4	10/18/2009	10/18/2009	0
Paciente 5	10/18/2009	10/18/2009	0

6. Taxa de conversão da mancha. Usando o marco temporal de seis

meses, verifique o registo da TB

para ver se há pacientes manchar-positivos que começaram o tratamento durante este tempo.

	Masculino	Fêmea	Total	Verificação de dados
Número total de pacientes manchar-positivos que começaram o tratamento durante este tempo:	38	20	58	58
Número destes pacientes que eram manchar-negativos após a fase intensiva	28	10	38	38

7. Resultado do tratamento. Usando o um marco temporal do ano,

verifique o registo da TB para ver se há o número de pacientes positivos da mancha que começaram o tratamento durante este tempo.

	Masculino	Fêmea	Total	Verificação de dados
Número total de pacientes que começaram o tratamento durante este tempo	22	17	39	39
Número de pacientes com uma mancha negativa para o fim do tratamento (C)	15	14	29	29
Número de pacientes que permaneceram manchar-positivo (POS)	2	1	3	3
Número de pacientes que terminaram a medicação, mas não retornou para o teste final do sputum (TC)	0	0	0	
Número de pacientes que pararam o tratamento para dois meses ou mais (AB)	1	0	1	1
Número de pacientes que morreram (OB)	4	2	6	6
Número de pacientes que transferiram a uma outra facilidade (T)	0	0	0	

8. Teste de MDR. Usando o um marco temporal do ano, procure os pacientes manchar-positivos da retirada no início do tratamento, os pacientes que permanecem manchar-positivos após a fase intensiva, ou as falhas do tratamento.

Verifique para ver se as amostras dos sputa foram emitidas para o teste da cultura e do susceptibilidade.

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes manchar-positivos da retirada	2	1	3	3
Número de sputa emitiu a Maputo no início do tratamento	2	1	3	3
Número de pacientes manchar-positivos após a fase intensiva	2	1	3	3
Número de sputa emitiu a Maputo após a fase intensiva	2	1	3	3
Número de pacientes que são manchar-positivos após um curso de tratamento cheio	0	0	0	
Número de sputa emitiu a Maputo após o tratamento cheio	0	0	0	

9. Gravação e relatório. Cartões de verificação para a integralidade.

	Número de cartões completos	Porcentage m
Quantos cartões uma pessoa de contato alistou?	10	200.0%
Quanto a data do registo e regista o número preencheu?	10	200.0%
Quanto o endereço preencheu?	10	200.0%
Quanto lista a categoria paciente da origem e do paciente?	10	200.0%
Quantos pacientes receberam o teste do sputum?	8	160.0%
Daqueles que receberam o teste, quantos cartões alistam os resultados do sputum?	8	100.0%
Quantos cartões alistam o regime e a dosagem de tratamento?	10	200.0%
Quantos cartões têm a seção da aderência moderna?	8	160.0%

Quanto incluem notas clínicas?	10	200.0%
Quanto daqueles cujo o resultado do tratamento e se descarrega os dados terminaram?	10	200.0%

10. Gerência clínica. Verific cada cartão para ver se o paciente está começ a dosagem correta.

	Número de cartões para este tipo de paciente	Número de cartões terminados corretamente	Número na dosagem correta	A porcentagem dos cartões terminou	Porcentagem na dosagem correta
Pacientes novos	9	9	9	100.0%	100.0%
Pacientes da retirada	1	1	1	100.0%	100.0%
Crianças	0	0	0		

11. Integração de TB-HIV. Peça para ver o registo de HIV/VCT. Olhe os registros no marco temporal de seis meses e verifique se os pacientes da TB estejam oferecidos VCT e se os pacientes seropositivos estão sendo selecionados para a TB.

	Masculino	Fêmea	Total	Verificação de dados
Número de pacientes da TB:	59	56	115	115
Número de pacientes da TB consultou para VCT	65	50	115	115
Número dos pacientes igualmente HIV+ da TB	49	38	87	87
Número de pacientes de TB também HIV+ que receberam pelo menos uma dose de TPC	49	38	87	87
Número de pacientes de TB também HIV+ que receberam TARV durante ou depois de tratamento de TB	7	13	20	20
Número de pacientes atuais de HIV+	405	433	838	838
Número de pacientes de HIV+ selecionados para a TB	312	288	600	600
Número de pacientes de HIV+ diagnosticados com TB	161	41	202	202

12. Garantia de qualidade. Verific o registo da qualidade da TB para ver se há slides de amostra dos sputa emitidos a Maputo

para a revisão durante o marco temporal de seis meses.

- Quantas correções foram emitidas? 10
- Quantos erros foram detectados? 0

Porcentagem dos erros
0.0%

● Que é o processo para decidir que correções são emitidas para a revisão de qualidade?

Partilha de 3 técnicos do sector

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São as correções escolhidas aleatória ou por um terceiro? aleatoriamente

13. Defesa e materiais do IEC. Verific para ver se há posters e panfletos da TB visíveis e disponíveis aos pacientes.

- Estão os panfletos da TB disponíveis? Sim, no português somente
- Há posters da TB nas paredes? Sim, no português somente

14. Gerência da droga. Peça para ver a farmácia. Verific a fonte de drogas da TB.

Droga	Uma quantidade disponível (#)	Data de validade válida? (Sim/Não)	Estoque adequado? (Sim/Não)	Cartões conservados em estoque exatos? (Sim/Não)	# das dias sem stock durante trimestre e anterior:
RHZE	336				
RH em 2 forças	718	Sim	Sim	Sim	
EMB	0	Sim	Sim	Sim	
Streptomycin	105	Sim	Sim	Sim	
RHZ	252	Sim	Sim	Sim	
RH para crianças	0	Sim	Sim	Sim	

● Há uma programação para requisitar drogas da TB? Sim

Se sim, que é a programação? Mensalmente

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● Que se as drogas funcionam para fora entre programado requisita?

Não

● Que você nunca não recebido as drogas requisitou?

Não

Se sim, tem como frequentemente isto ocorreu no ano passado? (# de épocas)

0

Fêz este resultado em você que funciona fora das drogas?

Sim

Quanto tempo era você sem medicação? (# de épocas)

0

15. Fontes de teste. Peça para ver as fontes para coletar, reparar, manchar e ler amostras do sputum.

	Fornece disponível? (Sim/Não)	Se Não, quantos dias foram para fora de estoque?
Frascos da coleção do Sputum	Sim	
Corrediças	Sim	
Deslize as tampas	Sim	
Álcool para a fixação da corrediça	Não	
Deslize a mancha.	Sim	
Microscópio de funcionamento	Sim	
Outro	Não	
Outro		
Outro		

16. Supervisao comunitaria. Pede o registo de visitas comunitarias.

Quantas visitas de supervisao na comunidade foram feitas nos ultimos 3 meses?

0

## Rural Health Center Summary

### Q1 2010

2. Number of staff members at this facility

Sum	Male	Female	Total	Minimum (Total)	Maximum (Total)
Medic	2	4	6	1	1
Technician	14	9	23	1	8
Nurse	22	19	41	4	11

Mean	Male	Female	Total
Medic	0.3	0.7	1.0
Technician	2.3	1.5	3.8
Nurse	3.7	3.2	6.8

2a. Staff trained in TB

Sum	Male	Female	Total	Minimum (Total)	Maximum (Total)
Medic	1	3	4	0	1
Technician	5	1	6	0	2
Nurse	8	4	12	1	3

Mean	Male	Female	Total
Medic	0.2	0.5	0.7
Technician	0.8	0.2	1.0
Nurse	1.3	0.7	2.0

2b. Microscopy staff

	Male	Female	Total	Minimum (Total)	Maximum (Total)
Total number of staff performing microscopy at this facility	7	2	9	1	2
Average number of staff performing microscopy at this facility	1.2	0.3	1.5		

● Ask all available staff performing microscopy, what was the date of his/her last microscopy training?

Average number of months since last laboratory training	11.0
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3. Check the TB register for the total number of current TB patients (adult, SS+)

Sum	Male	Female	Total	Minimum (Total)	Maximum (Total)
Number of TB patients	84	60	144	9	47
Number of new TB patients	71	50	121	6	43
Number of retreatment TB patients	8	1	9	0	4
Number of patients on CB-DOT	29	9	38	0	33
Number of patients on FB-DOT	55	51	106	4	47

Mean	Male	Female	Total
Number of TB patients	14.0	10.0	24.0
Number of new TB patients	11.8	8.3	20.2
Number of retreatment TB patients	1.3	0.2	1.5
Number of patients on CB-DOT	4.8	1.5	6.3
Number of patients on FB-DOT	9.2	8.5	17.7

- Count the number of patient cards.

	Total
Total number of patient cards	143
Average number of patient cards per HC	23.8
Number of HC with 100% of the patient cards	5

4. Suspecting TB. Using the three month timeframe, check the TB suspect register.

Sum	Male	Female	Total	Minimum (Total)	Maximum (Total)
Total number of TB suspects registered during this time	81	55	136	10	54
How many of the suspects were referred from the community?	19	9	28	0	16
Number of suspects assessed via sputum microscopy	61	52	113	10	46
Number of suspects assessed via x-ray	9	5	14	0	8
Number of suspects assessed via another method (ie physical exam)	12	9	21	1	9

Total number of SS+ patients	38	28	66	5	22
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Mean	Male	Female	Total
Total number of TB suspects registered during this time	13.5	9.2	22.7
How many of the suspects were referred from the community?	3.2	1.5	4.7
Number of suspects assessed via sputum microscopy	10.2	8.7	18.8
Number of suspects assessed via x-ray	1.5	0.8	2.3
Number of suspects assessed via another method (ie physical exam)	2.0	1.5	3.5
Total number of SS+ patients	6.3	4.7	11.0

5. Sputum turnaround time. Ask to see the sputum/laboratory book.

Look at the first five sputum tests performed during the last quarter. Write the date that the sample and received and the date it was read.

	Average number of days	Minimum	Maximum
Patients 1-5	0.4	0	3

6. Smear Conversion rate.

Using the six month timeframe, check the TB register for smear-positive patients who began treatment during this time.

Sum	Male	Female	Total	Minimum (Total)	Maximum (Total)
Total number of smear-positive patients who began treatment during this time:	56	41	97	5	27
Number of these patients that were smear-negative after the intensive phase:	50	34	84	5	23

Mean	Male	Female	Total
Total number of smear-positive patients who began treatment during this time:	9.3	6.8	16.2
Number of these patients that were smear-negative after the intensive phase:	8.3	5.7	14.0

7. Treatment Outcome. Using the one year timeframe,

check the TB register for the number of smear positive patients who started treatment

during this time.

Sum	Male	Female	Total	Minimum (Total)	Maximum (Total)
Total number of patients who started treatment during this time	38	18	56	3	18
Number of patients with a negative smear by the end of treatment (Cured):	28	12	40	2	14
Number of patients who remained smear-positive at the end of treatment (Treatment Failure)	1	0	1	0	1
Number of patients who completed medication, but did not return for final sputum test (Treatment Complete):	3	1	4	0	3
Number of patients who stopped treatment for two months or more (Interruption/Abandonment):	2	0	2	0	1
Number of patients who died:	3	3	6	0	2
Number of patients who transferred to another facility:	2	1	3	0	2

Mean	Male	Female	Total
Total number of patients who started treatment during this time	6.3	3.0	9.3
Number of patients with a negative smear by the end of treatment (Cured):	4.7	2.0	6.7
Number of patients who remained smear-positive at the end of treatment (Treatment Failure)	0.2	0.0	0.2
Number of patients who completed medication, but did not return for final sputum test (Treatment Complete):	0.6	0.2	0.8
Number of patients who stopped treatment for two months or more (Interruption/Abandonment):	0.3	0.0	0.3
Number of patients who died:	0.5	0.5	1.0
Number of patients who transferred to another facility:	0.3	0.2	0.5

8. MDR Testing. Using the one year timeframe, look for smear-positive retreatment patients at

the start of treatment,

patients who remain smear-positive after intensive phase, or treatment failures.

Check to see if sputa samples were sent for culture and suseptability testing.

Sum	Male	Female	Total	Minimum (Total)	Maximum (Total)
Total number of smear-positive retreatment patients:	5	2	7	0	2
Number of sputa sent to Maputo at the start of treatment:	1	0	1	0	1
Number of smear-positive patients after three months	4	0	4	0	1
Number of sputa sent to Maputo after the intensive phase:	1	0	1	0	1
Number of patients who are smear-positive after a full course (6 months) of treatment:	0	0	0	0	0
Number of sputa sent to Maputo after full treatment:	0	0	0	0	0

Mean	Male	Female	Total
Total number of smear-positive retreatment patients:	0.8	0.3	1.2
Number of sputa sent to Maputo at the start of treatment:	0.2	0.0	0.2
Number of smear-positive patients after three months	0.7	0.0	0.7
Number of sputa sent to Maputo after the intensive phase:	0.2	0.0	0.2
Number of patients who are smear-positive after a full course (6 months) of treatment:	0.0	0.0	0.0
Number of sputa sent to Maputo after full treatment:	0.0	0.0	0.0

9. Recording and Reporting. Check cards for completeness.

	Number of completed cards	%	SD	95% CI	
How many cards have a contact person listed?	27	90.0%	0.5	74.7%	100%
How many have the registration date (start of treatment) and register number filled in?	30	100.0%	0.0	100.0%	100.0%
How many have the address or a clear descriptive of how to find the home of the patient?	29	96.7%	0.4	87.5%	100%
How many list the patient origin and patient category (new, retreatment)?	30	100.0%	0.0	100.0%	100.0%
How many of the patients received sputum testing?	22	73.3%	1.0	50.8%	95.8%
Of those who received testing, how many cards list the sputum results?	22	100.0%	1.0	100.0%	100.0%
How many cards list the treatment regimen and dosage?	30	100.0%	0.0	100.0%	100.0%
How many cards have the adherence section up to date (if weekly treatment is given – up to one week ago; if monthly treatment – up to one month ago) and have correct dots or dashes?	25	83.3%	1.2	64.4%	100%
How many include clinical notes on progress or the condition of the patient (including the weight of the patient at each visit)? Notes can also be made here on tracing the patient in case of irregular attendance	28	93.3%	0.8	80.6%	100%
How many have the treatment outcome and discharge data completed on their cards?	28	93.3%	0.8	80.6%	100%

10. Clinical Management. Check each card to see if the patient is getting the correct dosage.

Sum	Number of cards for this type of patient	Number of cards completed correctly	% of cards completed	SD	95% CI

		y				
New patients	24	23	95.8%	0.8	84.5%	100%
Retreatment patients	4	4	100.0%	0.5	100.0%	100.0%
Children	2	2	100.0%	0.5	100.0%	100.0%

Average	Number of cards for this type of patient	Number of cards completed correctly
New patients	4	3.8
Retreatment patients	0.66667	0.7
Children	0.3	0.3

11. TB-HIV Integration. Ask to see the HIV/VCT register. Look at the records in the six month timeframe and check whether TB

patients are offered VCT and whether HIV positive patients are being screened for TB.

	Male	Female	Total	Minimum (Total)	Maximum (Total)
Total number of TB patients:	97	74	171	17	63
Number of TB patients referred for VCT:	96	74	170	17	62
Number of TB patients also HIV+	54	50	104	9	42
Number of HIV+/TB+ patients who receive at least one dose of co-trimoxazole preventative therapy (CPT) during TB treatment	53	50	103	8	42
Number of HIV+/TB+ patients who are on or continue ARV therapy, during or at the end of TB treatment	18	14	32	1	15
Number of current HIV+ patients:	553	1641	2194	36	1642
Number of HIV+ patients screened for TB:	165	457	622	17	270
Number of HIV+ patients diagnosed with TB:	25	22	47	1	27

12. Quality Assurance. Check the TB quality log for sputa sample slids sent to Maputo for review during

the six month timeframe.

● How many slides were sent for QA review?	20	%
● How many errors were detected?	0	0.0%
● How many HCs sent slides for review?	1	

● What is the process to decide which slides are sent for quality review?

Number of HCs randomly selecting slides for review	0
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13. Advocacy and IEC materials. Check to see if there are TB posters and pamphlets visible and available to patients.

	TB Pamphlets	TB Posters
Yes, in Portuguese	4	5
Yes, in Shangann	0	0
Yes, in both Portuguese and Shangann	1	0
Yes (Total)	5	5
No	1	1
Data verification	6	6

14. Drug management. Ask to see the pharmacy. Check the supply of TB drugs.

	RHZE	RH em 2 forças	EMB	Streptomycin	RHZ	RH para crianças
Amount available	19544	11880	0	1030	11212	18000
Number of HC whose expiration dates were valid	6	5	0	4	6	5
Percentage with valid expiration dates	100.0%	83.3%	0.0%	66.7%	100.0%	83.3%
Number of HCs with adequate stock	6	5	0	4	6	5
Percentage with adequate stock	100.0%	83.3%	0.0%	66.7%	100.0%	83.3%
Number of HCs with accurate stock cards	6	6	0	4	6	5
Percentage with accurate stock cards	100.0%	100.0%	0.0%	66.7%	100.0%	83.3%
Number of days with stock outs in the previous quarter	0	36	0	150	0	30
Average number of stock out days in the previous quarter	0	7.2	#DIV/0!	30	0	5

	Yes	No	No response	Total
Is there a schedule for ordering TB drugs?	6	0	0	6
Percentage	100.0%	0.0%	0.0%	100.0%

	Yes	No	No response	Total
Have you ever not received the drugs you ordered?	1	0	0	1
Percentage	16.7%	0.0%	0.0%	16.7%

	Sum	Mean	Minimum	Maximum
If yes, how many times has this occurred in the past year?	1	1	1	1

	Yes	No	No response	Total
Did this result in you running out of drugs?	1	0	0	1
Percentage	16.7%	0.0%	0.0%	16.7%

	Sum	Mean	Minimum	Maximum
How long were you without medication?	30	30	30	30

15. Testing supplies. Ask to see the supplies for collecting, fixing, staining and reading sputum samples.

	Number of HCs with stock available	Average # of days of stock outs during last quarter	Min # of days with stock outs in the last quarter	Max # of days with stock outs during last quarter
Sputum collection bottles	6	2.8	0	7
Slides	6	1.25	0	5
Slide covers	6	0	0	0
Alcohol	6	1.25	0	5
Slide stain	6	0	0	0

Functioning microscope	6	0	0	0
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16. Supervisory visits. Ask to see the log of supervisory visits.

	Sum	Mean	Minimum	Maximum
How many supervisory visits were made to the community during the last quarter?	6	1.0	0	2

**Rural Health Center Indicators**  
**Q1 2010**

Strategy	Indicator	Numerator	Denominator	Percentage/ Total
1.2	Case Notification Rate	66	580046	11.4
1.2	Number and Percentage of TB suspects examined by sputum microscopy	113	136	83.1%
1.2	Number of referrals received from volunteers (as measured by the HC)	28	136	20.6%
1.3	<i>Cohort analysis for treatment outcomes of SS+ patients</i>			
1.3	Treatment success	44	56	78.6%
1.3	Cure rate	40	56	71.4%
1.3	Treatment Completed	4	56	7.1%
1.3	Treatment Failure	1	56	1.8%
1.3, 2.5	Interuption rate	2	56	3.6%
1.3	Patients who died	6	56	10.7%
1.3	Transferred patients	3	56	5.4%
1.3	Percentage of patients on CB-DOT	38	144	26.4%
2.1	Percentage of facilities with assessments completed	6	6	100.0%
2.1	Percentage of health facility assessemnts conducted with particpateion from the District TB Coordinator or designated rep.			
2.2	Proportion of major errors	0	20	0.0%
2.2	Sputum smear conversion	84	97	86.6%
2.2	Proportion of TB suspects with SS+ confirmation (WHO)	66	136	48.5%
2.5	# of HC reporting drug stock outs in the last quarter	3	6	50.0%
2.6	Percentage of HPs supervised by the District TB Coordinator during the previous quarter	6	6	100.0%
3.2	Proportion of TB/HIV patients on CPT	103	104	99.0%
3.3	Proportion of HIV+ patients screened for TB	622	2194	28.4%
3.3	Precentage of TB+ patients tested for HIV	170	171	99.4%

## Secondary Indicators

Case detection rate (Using est cases per Gaza Province MOH)	66	101.5	65.0%
Smear positivity rate	66	113	58.4%
Percentage of HCs who sent slides for QA reivew	1	6	16.7%
Percentage of new patients who remain SS+ after the intensive phase that are cultured for MDR-TB	1	7	14.3%
Percentage of retreatment patients cultured for MDR-TB	1	4	25.0%
Percentage of MDR-TB cases			
Percentage of new TB cases			
Percentage of retreatment cases			
Number of microscopists per 100,000 people	9	210915	4.3
Average number of slides read per day per microscopist (USAID DIP Guidance) # of readers / (# of sputum tests/90)	1.26	9	0.14
Percentage of TB patients who are also HIV+	104	171	60.8%
Percentage of TB+/HIV+ patients on ART	32	104	30.8%

## Health Center Summary (Rural and Urban Sites)

Q1 2010

2. Number of staff members at this facility

Sum	Male	Female	Total	Minimum (Total)	Maximum (Total)
Medic	3	7	10	1	3
Technician	18	12	30	1	8
Nurse	24	35	59	4	11

Mean	Male	Female	Total
Medic	0.4	0.9	1.3
Technician	2.3	1.5	3.8
Nurse	3.0	4.4	7.4

2a. Staff trained in TB

Sum	Male	Female	Total	Minimum (Total)	Maximum (Total)
Medic	2	6	8	0	3
Technician	6	3	9	0	2
Nurse	10	12	22	1	8

Mean	Male	Female	Total
Medic	0.3	0.8	1.0
Technician	0.8	0.4	1.1
Nurse	1.3	1.5	2.8

2b. Microscopy staff

	Male	Female	Total	Minimum (Total)	Maximum (Total)
Total number of staff performing microscopy at this facility	12	4	16	1	4
Average number of staff performing microscopy at this facility	1.5	0.5	2.0		

● Ask all available staff performing microscopy, what was the date of his/her last microscopy training?

Average number of months since last laboratory training	15.0
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3. Check the TB register for the total number of current TB patients (adult, SS+)

Sum	Male	Female	Total	Minimum (Total)	Maximum (Total)
Number of TB patients	205	157	362	9	112
Number of new TB patients	179	137	316	6	105
Number of retreatment TB patients	21	11	32	0	16
Number of patients on CB-DOT	66	34	100	0	62
Number of patients on FB-DOT	139	123	262	4	112

Mean	Male	Female	Total
Number of TB patients	25.6	19.6	45.3
Number of new TB patients	22.4	17.1	39.5
Number of retreatment TB patients	2.6	1.4	4.0
Number of patients on CB-DOT	8.3	4.3	12.5
Number of patients on FB-DOT	17.4	15.4	32.8

- Count the number of patient cards.

	Total
Total number of patient cards	361
Average number of patient cards per HC	45.1
Number of HC with 100% of the patient cards	7

4. Suspecting TB. Using the three month timeframe, check the TB suspect register.

Sum	Male	Female	Total	Minimum (Total)	Maximum (Total)
Total number of TB suspects registered during this time	272	183	455	10	216
How many of the suspects were referred from the community?	19	9	28	0	16
Number of suspects assessed via sputum microscopy	220	154	374	10	163
Number of suspects assessed via x-ray	19	11	30	0	16
Number of suspects assessed via another method (ie physical exam)	34	29	63	1	37
Total number of SS+ patients	119	84	203	5	78

Mean	Male	Female	Total
Total number of TB suspects registered during this time	34.0	22.9	56.9
How many of the suspects were referred from the community?	2.4	1.1	3.5
Number of suspects assessed via sputum microscopy	27.5	19.3	46.8
Number of suspects assessed via x-ray	2.4	1.4	3.8
Number of suspects assessed via another method (ie physical exam)	4.3	3.6	7.9
Total number of SS+ patients	14.9	10.5	25.4

5. Sputum turnaround time. Ask to see the sputum/laboratory book.

Look at the first five sputum tests performed during the last quarter. Write the date that the sample and received and the date it was read.

	Sputum TAT (Days)	Minimum	Maximum
Patients 1-5	0.30	0	3

6. Smear Conversion rate.

Using the six month timeframe, check the TB register for smear-positive patients who began treatment during this time.

Sum	Male	Female	Total	Minimum (Total)	Maximum (Total)
Total number of smear-positive patients who began treatment during this time:	139	84	223	5	68
Number of these patients that were smear-negative after the intensive phase:	107	63	170	5	48

Mean	Male	Female	Total
Total number of smear-positive patients who began treatment during this time:	17.4	10.5	27.9
Number of these patients that were smear-negative after the intensive phase:	13.4	7.9	21.3

7. Treatment Outcome. Using the one year timeframe,

check the TB register for the number of smear positive patients who started treatment during this time.

Sum	Male	Female	Total	Minimum (Total)	Maximum (Total)
Total number of patients who started treatment during this time	94	67	161	3	66
Number of patients with a negative smear by the end of treatment (Cured):	67	52	119	2	50
Number of patients who remained smear-positive at the end of treatment (Treatment Failure)	4	2	6	0	3
Number of patients who completed medication, but did not return for final sputum test (Treatment Complete):	3	1	4	0	3
Number of patients who stopped treatment for two months or more (Interruption/Abandonment):	2	0	6	0	1
Number of patients who died:	3	3	23	0	2
Number of patients who transferred to another facility:	2	1	3	0	2

Mean	Male	Female	Total
Total number of patients who started treatment during this time	11.8	8.4	20.1
Number of patients with a negative smear by the end of treatment (Cured):	8.4	6.5	14.9
Number of patients who remained smear-positive at the end of treatment (Treatment Failure)	0.6	0.3	0.9
Number of patients who completed medication, but did not return for final sputum test (Treatment Complete):	0.4	0.1	0.6
Number of patients who stopped treatment for two months or more (Interruption/Abandonment):	5.0	1.0	6.0
Number of patients who died:	14.0	9.0	23.0
Number of patients who transferred to another facility:	2.0	1.0	3.0

8. MDR Testing. Using the one year timeframe, look for smear-positive retreatment patients at the start of treatment,

patients who remain smear-positive after intensive phase, or treatment failures.

Check to see if sputa samples were sent for culture and susceptibility testing.

Sum	Male	Female	Total	Minimum (Total)	Maximum (Total)
Total number of smear-positive retreatment patients:	9	6	15	0	5
Number of sputa sent to Maputo at the start of treatment:	5	4	9	0	5
Number of smear-positive patients after three months	7	1	8	0	3
Number of sputa sent to Maputo after the intensive phase:	4	1	5	0	3
Number of patients who are smear-positive after a full course (6 months) of treatment:	1	0	1	0	1
Number of sputa sent to Maputo after full treatment:	1	0	1	0	1

Mean	Male	Female	Total
Total number of smear-positive retreatment patients:	1.1	0.8	1.9
Number of sputa sent to Maputo at the start of treatment:	0.6	0.5	1.1
Number of smear-positive patients after three months	0.9	0.1	1.0
Number of sputa sent to Maputo after the intensive phase:	0.5	0.1	0.6
Number of patients who are smear-positive after a full course (6 months) of treatment:	0.1	0.0	0.1
Number of sputa sent to Maputo after full treatment:	0.1	0.0	0.1

9. Recording and Reporting. Check cards for completeness.

	Number of completed cards	%	SD	95% CI

How many cards have a contact person listed?	45	81.8%	2.2	62.2%	100%
How many have the registration date (start of treatment) and register number filled in?	50	90.9%	2.3	76.3%	100%
How many have the address or a clear descriptive of how to find the home of the patient?	47	85.5%	2.0	67.5%	100%
How many list the patient origin and patient category (new, retreatment)?	50	90.9%	2.3	76.3%	100%
How many of the patients received sputum testing?	37	67.3%	2.0	43.4%	91.1%
Of those who received testing, how many cards list the sputum results?	37	100.0%	2.0	100.0%	100.0%
How many cards list the treatment regimen and dosage?	50	90.9%	2.3	76.3%	100%
How many cards have the adherence section up to date (if weekly treatment is given – up to one week ago; if monthly treatment – up to one month ago) and have correct dots or dashes?	43	78.2%	2.5	57.2%	99.2%
How many include clinical notes on progress or the condition of the patient (including the weight of the patient at each visit)? Notes can also be made here on tracing the patient in case of irregular attendance	48	87.3%	2.6	70.3%	100%
How many have the treatment outcome and discharge data completed on their cards?	48	87.3%	2.6	70.3%	100%

10. Clinical Management. Check each card to see if the patient is getting the correct dosage.

	Number of cards for this type of patient	Number of cards completed correctly	% of cards completed	SD	95% CI	
New patients	40	39	97.5%	2.1	90.6%	100%
Retreatment patients	6	6	100.0%	0.5	100.0%	100.0%
Children	4	4	100.0%	0.8	100.0%	100.0%



Number of HCs randomly selecting slides for review	0
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13. Advocacy and IEC materials. Check to see if there are TB posters and pamphlets visible and available to patients.

	TB Pamphlets	TB Posters
Yes, in Portuguese	6	6
Yes, in Shangann	0	0
Yes, in both Portuguese and Shangann	1	0
Yes (Total)	7	6
No	1	2
Data verification	8	8

14. Drug management. Ask to see the pharmacy. Check the supply of TB drugs.

	RHZE	RH em 2 forças	EMB	Streptomycin	RHZ	RH para crianças
Amount available	20456	14062	7000	1335	11901	27540
Number of HC whose expiration dates were valid	7	7	2	6	8	6
Percentage with valid expiration dates	87.5%	87.5%	25.0%	75.0%	100.0%	75.0%
Number of HCs with adequate stock	7	7	2	6	8	7
Percentage with adequate stock	87.5%	87.5%	25.0%	75.0%	100.0%	87.5%
Number of HCs with accurate stock cards	7	8	2	6	7	7
Percentage with accurate stock cards	87.5%	100.0%	25.0%	75.0%	87.5%	87.5%
Number of days with stock outs in the previous quarter	0	36	0	150	0	30
Average number of stock out days in the previous quarter	0	7.2	#DIV/0!	30	0	5

	Yes	No	No response	Total
Is there a schedule for ordering TB drugs?	8	0	0	8
Percentage	100.0%	0.0%	0.0%	100.0%

	Yes	No	No response	Total
Have you ever not received the drugs you ordered?	2	6	0	8
Percentage	25.0%	75.0%	0.0%	100.0%

	Sum	Mean	Minimum	Maximum
If yes, how many times has this occurred in the past year?	60	20	0	30

	Yes	No	No response	Total
Did this result in you running out of drugs?	2	5	1	8
Percentage	33.3%	83.3%	16.7%	133.3%

	Sum	Mean	Minimum	Maximum
How long were you without medication?	30	30	30	30

15. Testing supplies. Ask to see the supplies for collecting, fixing, staining and reading sputum samples.

	Number of HCs with stock available	Average # of days of stock outs during last quarter	Min # of days with stock outs in the last quarter	Max # of days with stock outs during last quarter
Sputum collection bottles	8	2.8	0	7
Slides	8	1.25	0	5
Slide covers	8	0	0	0
Alcohol	6	7	0	30
Slide stain	8	0	0	0
Functioning microscope	8	0	0	0

16. Supervisory visits. Ask to see the log of supervisory visits.

	Sum	Mean	Minimum	Maximum
How many supervisory visits were made to the community during the last quarter?	7	0.9	0	2

**Health Center Indicators (Rural and Urban)**  
**Q1 2010**

Strategy	Indicator	Numerator	Denominator	Percentage/ Total
1.2	Case Notification Rate	203	580046	35.0
1.2	Number and Percentage of TB suspects examined by sputum microscopy	374	455	82.2%
1.2	Number of referrals received from volunteers (as measured by the HC)	28	455	6.2%
1.3	<i>Cohort analysis for treatment outcomes of SS+ patients</i>			
1.3	Treatment success	123	161	76.4%
1.3	Cure rate	119	161	73.9%
1.3	Treatment Completed	4	161	2.5%
1.3	Treatment Failure	6	161	3.7%
1.3, 2.5	Interuption rate	6	161	3.7%
1.3	Patients who died	23	161	14.3%
1.3	Transferred patients	3	161	1.9%
1.3	Percentage of patients on CB-DOT	100	362	27.6%
2.1	Percentage of facilities with assessments completed	8	8	100.0%
2.1	Percentage of health facility assesements conducted with participateion from the District TB Coordinator or designated rep.			
2.2	Proportion of major errors	0	40	0.0%
2.2	Sputum smear conversion	170	223	76.2%
2.2	Proportion of TB suspects with SS+ confirmation (WHO)	203	455	44.6%
2.5	# of HC reporting drug stock outs in the last quarter	3	8	37.5%
2.6	Percentage of HPs supervised by the District TB Coordinator during the previous quarter	7	8	87.5%
3.2	Proportion of TB/HIV patients on CPT	379	380	99.7%
3.3	Proportion of HIV+ patients screened for TB	1609	3454	46.6%

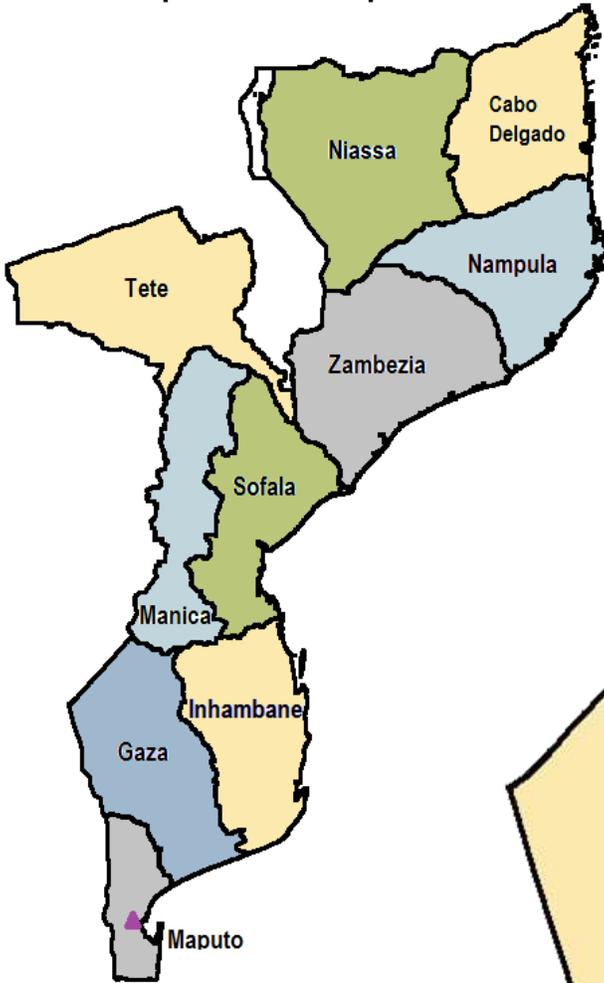
3.3	Percentage of TB+ patients tested for HIV	509	510	99.8%
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### Secondary Indicators

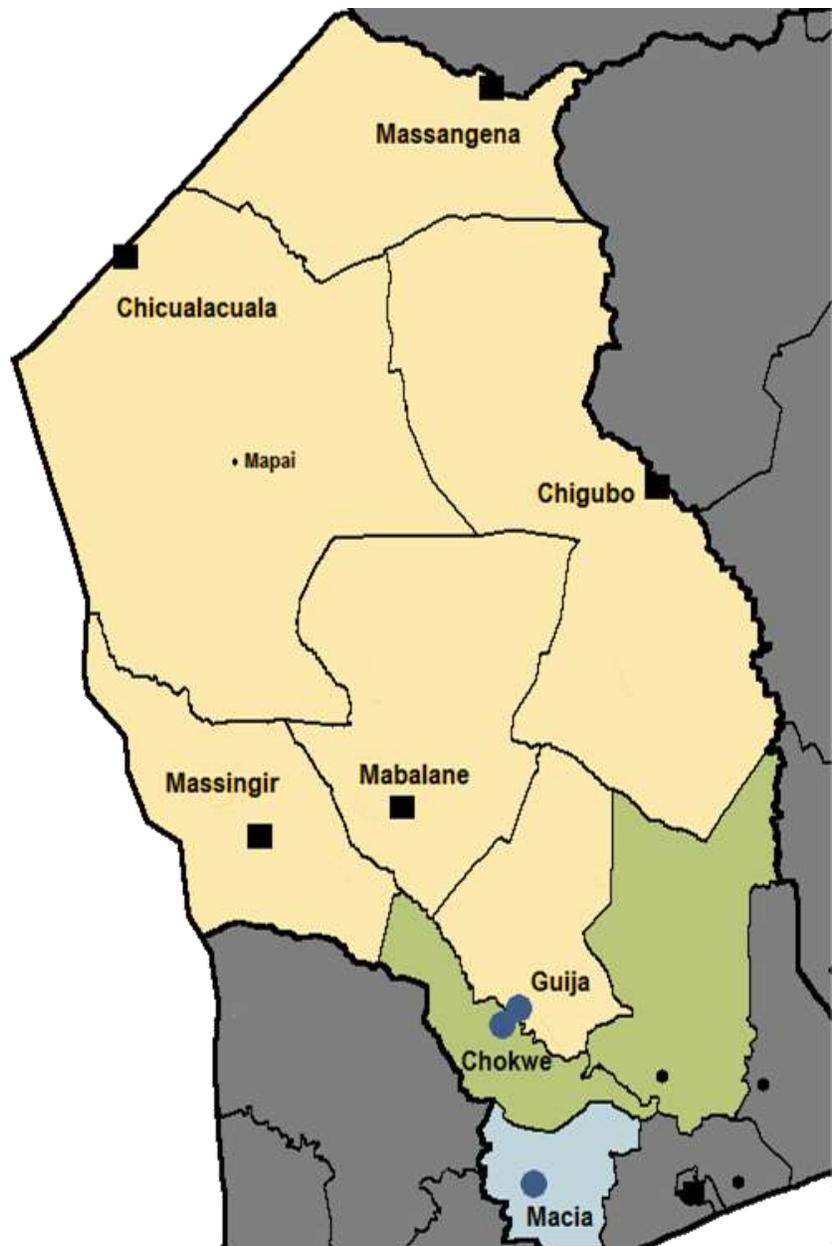
Case detection rate (Using est cases per Gaza Province MOH)	203	260.5	77.9%
Smear positivity rate	203	374	54.3%
Percentage of HCs who sent slides for QA reiew	3	8	37.5%
Percentage of new patients who remain SS+ after the intensive phase that are cultured for MDR-TB	9	15	60.0%
Percentage of retreatment patients cultured for MDR-TB	5	8	62.5%
Percentage of MDR-TB cases			
Percentage of new TB cases			
Percentage of retreatment cases			
Number of microscopists per 100,000 people	16	580046	2.8
Average number of slides read per day per microscopist (USAID DIP Guidance) # of readers / (# of sputum tests/90)	4.16	16	0.26
Percentage of TB patients who are also HIV+	380	510	74.5%
Percentage of TB+/HIV+ patients on ART	183	380	48.2%

# Annex 11: Project Area Map

## Map of Mozambique



## Gaza Province Map



### KEY:

- Urban Health Centers/  
Urban Project Areas
- Rural Project Areas
- Rural Health Centers

## Annex 12: Community Strategies

**Strategies for rural project areas:** The project strategy for the rural districts is grounded in World Relief's 14 years of experience using Care Groups in Mozambique as an effective approach to community mobilization for improved health practices and effective disease surveillance.

A Care Group is a group of ten volunteers, community-based health educators who regularly meet together with project staff for training, supervision and support. They differ from mother's groups in that each volunteer is responsible for regularly visiting 10-15 neighboring families and sharing what she has learned to facilitate behavior change in households. Care groups create a multiplying effect to equitably reach every family with interpersonal BCC and social support. All family members can participate in home visits. Care Group volunteers in Mozambique are already established neighborhood resource people for an integrated package of health concerns. The caring nature of the groups inspires trust between neighbors and works to strengthen the fabric of communities. Care Groups also provide the structure for a Community Health Information System (C-HIS).

During Care Group meetings, volunteers are trained in the prevention, care seeking, and management of TB using culturally appropriate, participatory adult education techniques such as dialogue, story, song, drama and pictures. The volunteers use role plays to practice how they will accurately convey the information they learn with their neighbors. Once a month, the volunteers also report vital events for their 15 households as part of the C-HIS. Volunteers discuss the results, focusing on problems that emerge within individual households as well as the community. Suspected TB cases referred for care and their follow-up will be added to the C-HIS through this project. The APE/APE aggregates findings from their area and shares them with local leaders at the Village Health Committee and with the MOH. Community involvement in the health information system is a catalyst for community-lead action.

The six rural districts have a total of 3,421 female volunteers organized into 342 Care Groups. Care Groups make the supervision of large numbers of volunteers manageable because the volunteers are organized into groups with a lead volunteer who is the point person for the MOH and anyone else needing to leverage volunteer assistance at community level.

Ten paid TB project supervisors will have direct responsibility for training Care Groups in their geographic area in addition to liaising with health center and health post staff, local authorities, VHCs and religious leaders. Many former Care Group project animators who were necessary for training Care Groups in multi-intervention C-IMCI still live in the same communities. In this project, because of the narrower scope and need for less frequent meetings, it will be possible for Supervisors to directly train Care Groups themselves. However, they will honor and leverage the former animators (125) by inviting them to be involved in a voluntary capacity.

Care groups reflect communal values, provide encouragement and social support to the volunteers, and permit the extensive development of highly effective traditional educational methodologies (song and drama). Training numerous volunteers in each village provides a critical mass for community-wide change and the maintenance of changed behaviors. WR CSPs using CG methodology have successfully mobilized volunteers in Africa and Asia. Care Group volunteer attrition in World Relief Mozambique Child Survival Projects has averaged less than 2% per year.

**Strategies for urban project areas:** The project also covers three urban centers in Gaza where WR Mozambique's PEPFAR-funded HIV/AIDS program has established volunteer networks. Pastors' Networks (PN) are open to all denominations active in the community, and are the community organization responsible for recruiting and supporting OVC volunteers. The three PNs in Gaza Province average 20 churches, each with approximately 5 OVC volunteers. Each volunteer serves approximately 10 families, depending on the needs in the home. OVC volunteers have less responsibility and training and may not have the level of skills needed to also take on responsibility for CB-DOTS. However, they can contribute to case detection, referral, and social support. Additionally, the three areas with Home Based Care Activists have about 30 Activists. Each HBCA cares for as many as 10-15 PLWHAs. HBCAs have completed the MOH curriculum for home care and securing government certification. Responsibilities of the HBCA include clinical follow up with clients, referring for TB screening where indicated, follow up with antiretrovirals and palliative care, and regular reporting to the Ministry of Health. At present, the HBCAs have received some TB training and they look for and refer HIV/AIDS patients who have signs and symptoms of TB for screening. They are not engaged in CB-DOT, as the training provided through this project would facilitate.

## Annex 13: Overview of Care Groups

World Relief implements child survival interventions in several countries through the innovative Care Group model. The Care Group model has been in use since 1995 when it was pioneered in Mozambique, and has been successfully adapted in diverse cultural settings such as Cambodia, Rwanda and Malawi. It has proven to be an effective and low cost strategy in strengthening district level health system, improving disease surveillance and health service delivery, and empowering women and community stakeholders.

A care group comprises 10 to 15 volunteer community-based health educators who regularly meet together with project staff for training, supervision and support. Each care group volunteer is responsible for visiting and teaching health lessons to mothers and other important health decision-makers in the 10-15 households closest to her, by visiting each household individually. This relatively low ratio of households per volunteer makes it possible for the volunteer to interact with each household effectively, and develop deeper personal relationships for promoting behavior change compared to models using a higher ratio of households to volunteers. The Care Group model is designed to reach every household within a defined geographic area with children under five years of age and women of child bearing age (15-49), thereby achieving complete and consistent coverage of the project area. The “saturation coverage” design ensures that every household with a child under the age of five or a woman of child-bearing age receives a volunteer visit at least twice a month, ensuring equity in the implementation of child survival interventions at community and household levels.

Care groups create a “multiplier effect” — one staff promoter trains and supervises as many as eight care groups of 10-15 volunteers each. The large number of volunteers mobilized ensures breadth of outreach — WR’s second CSP in Mozambique used 2,315 volunteers to reach more than 50,000 direct beneficiaries every two weeks. This enables a relatively small number of paid project staff to reach a large beneficiary population without overburdening staff or individual volunteers. The number of care group volunteers in every community creates a critical mass for changing health practices. Behavior change becomes more than an individual decision — it becomes a social movement involving the entire community. Furthermore, the care group model effectively mobilizes community and religious leaders, local village health committees and Ministry of Health (MOH) staff who in turn support care groups’ work, reinforce their health messages and work together to take wider action on community health issues.

Care groups are distinguished by the on-going relationships within the Care Group as well as each volunteer’s responsibility to teach individual households outside of the meeting, thus multiplying training. Volunteers belonging to Care Groups provide greater peer support, develop stronger commitment to health activities and find more creative solutions to challenges by working as a group compared to individual volunteers expected to work independently. Group solidarity and shared sense of community service grow very strong in Care Groups, sustaining the spirit of volunteerism and preventing volunteer burn-out.

Promoters set goals that care group volunteers can only reach through a corporate effort, not just for individual volunteers. Shared goals create a sense of identity and solidarity in the care group, encouraging volunteers to assist each other when they encounter problems. The high proportion of volunteers in a community means they have each other to turn to for help, rather than relying solely on project staff. At care group meetings, volunteers benefit from the small group training environment and the opportunity to share and learn from one another. The combined strength of the group also makes it easier to include illiterate volunteers – the care group model requires only a minimal number of volunteers with basic literacy skills.

Care Groups outlast funding cycles because they promote truly changed communities who value care group volunteers' contributions to their health and wellbeing. Over time, communities identify the care groups as belonging to the community rather than the project. The obvious impact and community support motivate volunteers to continue their work. In a follow-up survey to Vurhonga I conducted 20 months after the project stopped working in the area, Care Groups' net retention rate of volunteers was 94%. In addition, sustainability is enhanced as community leadership act on feedback from care groups, using the volunteers to mobilize community responses to changing health needs.

The Care Group model has produced dramatic improvements in health behaviors that impact child survival, in addition to improvements in health service coverage and utilization, as evidenced by external evaluation and district MOH records. Some of these results are highlighted in the table below:

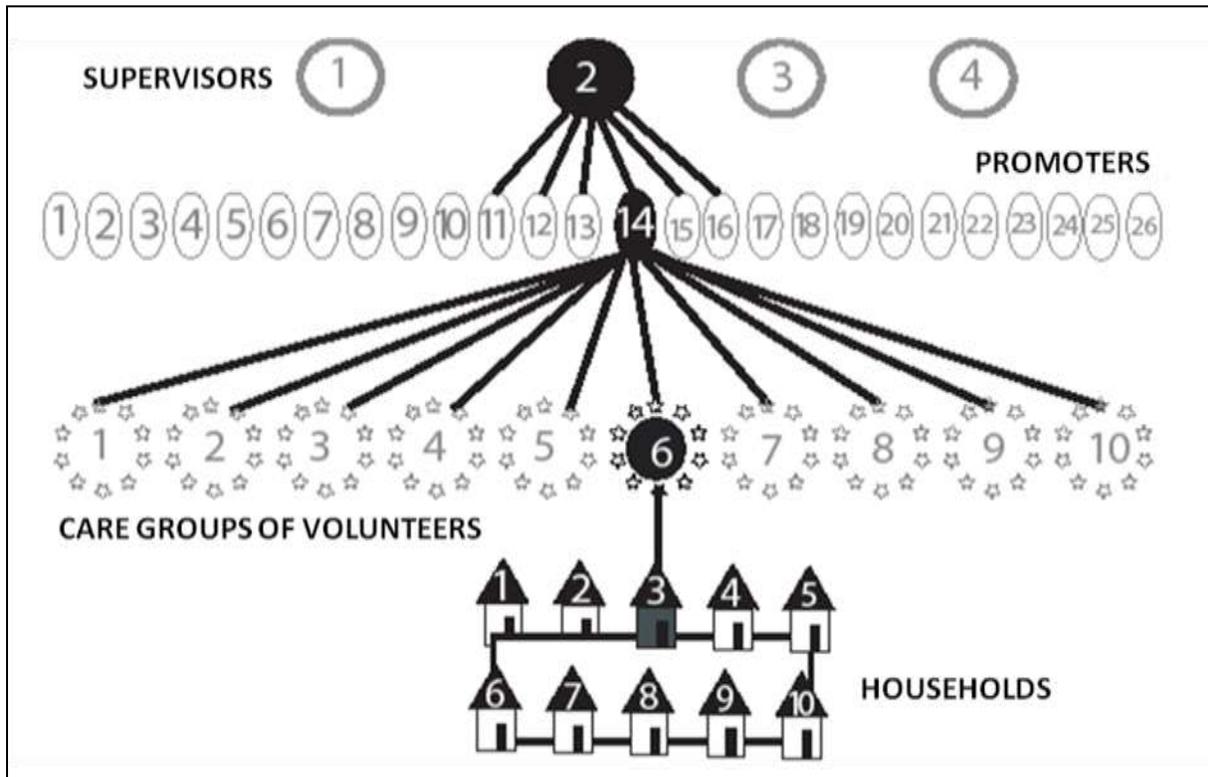
*Highlights of World Relief Child Survival Project Indicators*

	Mozambique		Malawi		Cambodia		Rwanda	
	B	F	B	F	B	F	B	F
ORT for diarrhea	47%	82%	--	--	18%	80%	NA	87%
Full Immunization	37%	93%	--	--	5%	81%	47%	97%
ITN use in under fives	0%	85%	8%	60%	--	--	3%	70%
EBF at 6months	16%	55%	36%	95%	8%	37%	60%	99%
Seek treatment within 24 hours if children have fever	11%	85%	35%	74%	--	--	3%	80%
Seek treatment within 24 hours for rapid breathing	2%	87%	28%	64%	--	--	--	--
Use of modern family planning methods	3%	23%	23%	61%	21%	56%	--	--

B = Baseline F= Final (4-5 years later)

Over all, the Care Group model has been an effective strategy for sustaining quality preventative and care seeking behaviors, increasing access to, and utilization of health services, and improving overall health and well being of community members.

Care Group Model, Example Organizational Chart



## Annex 14: Referral Flow Chart

