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**TB CARE I**

# **TB CARE I - DJIBOUTI**

**Year 2**

**Annual Report**

**October 1, 2011 – September 30, 2012**

**October 30, 2012**

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## **List of Abbreviations**

APA: Annual Plan of Action

DOTS: Directly Observed Treatment Short course

DST: Drug Susceptibility Testing

FIND: Foundation for Innovative New Diagnostics

GF: Global Fund

HIV: Human Immunodeficiency Virus

HSS: Health System Strengthening

MDR: Multi Drug Resistant tuberculosis

MOH: Ministry of Health

NRL: National Reference Laboratory

NTP: National Tuberculosis Programme

PMDT: Programmatic Management of Drug Resistant TB

QA: Quality Assurance

R10: Round 10

STB: Stop TB

TB: tuberculosis

UN: United Nations

WHO: World Health Organization

## **Executive Summary**

TBCARE 1 in Djibouti has as lead partner WHO and the NTP and MOH as collaborating partners. The staff is limited to the country director although he works closely with the NTP central unit staff. The project covers the whole population of Djibouti.

As part of APA2, the project worked in the following technical areas with the total buy-in amount of 250,000 USD:

- Universal access
- Laboratories
- Programmatic Management of Drug Resistant TB (PMDT)
- Health Systems Strengthening
- M&E, OR and Surveillance
- Drug supply and management

### **Laboratories**

The target was achieved in respect of the technical outcomes of having the five following technologies:

- GeneXpert
- TB culture
- first line DST
- HAIN
- LED microscopy

GeneXpert was introduced by TB CARE I while TB culture, first line DST and Hain were introduced by FIND; LED microscopy being already present at the baseline.

TB CARE I fulfilled the need for the introduction of GeneXpert in order to ensure early diagnosis of smear negative pulmonary cases notably HIV positive persons and children, and early diagnosis of rifampicin resistance among retreatment cases, HIV positive TB suspects and TB suspects among contacts of MDR cases.

A 4 module GeneXpert instrument was procured together with 2060 cartridges and related complementary equipment including a computer and a refrigerator.

A 5-day training for setting up and using the GeneXpert instrument by Cepheid was held from 16-20 July 2012. The training was conducted on the web with the participation of all staff from the NRL (5 technicians including one female person).

With USAID supported technical assistance an algorithm for diagnosing TB and MDR TB based on new rapid diagnostic technologies was developed.

The head of the National Reference Laboratory and the WHO TB Medical Officer participated in an international training in Mombasa in May 2012 with the technical and financial support of USAID.

A training of doctors on the use of the TB CARE I developed algorithm based on GeneXpert was conducted in July 2012 with the involvement of TB CARE I local technical assistance and the National TB Reference Hospital in the facilitation.

GeneXpert has been performed starting from August 2012 with the following results:

- In August 34 tests were performed with the following results:
  - No TB detected=25;
  - TB detected=5;
  - RIF resistance detected=4;
  - indeterminate=0.
- In September 102 tests were performed with the following results:
  - No TB detected=64;
  - TB detected=25;
  - RIF resistance detected=13; indeterminate=0;

Erroneous results: 6 because of power failure.

### **Programmatic Management of Drug Resistant TB (PMDT)**

The target of 100% of MDR TB patients being enrolled on second line treatment according to the national protocol has not been achieved and only 37% of MDR patients were put on treatment.

In the absence of GF funds to purchase second line drugs, some patients were detected and enrolled on MDR treatment using the Union endorsed Bangladesh protocol. This was on the own initiative of the National TB Reference Center without the endorsement of the NTP, and WHO, which does not recommend this protocol for routine use.

Nevertheless, TB CARE I had a contribution in MDR management by developing the algorithm for MDR diagnosis. National guidelines for programmatic management of MDR TB were discussed and endorsed by the national stakeholders. These guidelines will be published in December 2012 after being drafted in French. At that time doctors and nurses from the National TB Reference Centre will have been trained on MDR TB case management.

The overall picture will be completed by the procurement of second line drugs through the GF R10 TB grant, which is expected to be implemented starting 1st January 2013, which will result in a proper and adequate programmatic management of MDR TB in line with internationally endorsed procedures and based on modern technologies.

### **Health System Strengthening (HSS)**

The indicator of 100% of supervisory visits planned being conducted according to country supervisory standards was reached at 96%.

The target for the year was 140 visits. However 5 planned visits to the districts during the first quarter could not be conducted for reasons of lack of funds at the time. Therefore 135 visits out 140 were conducted. This type of indicator cannot be caught up as the 5 visits were supposed to be conducted in the first quarter.

The supervisions were supported technically (checklist and supervision guide) and financially by TB CARE I.

### **Monitoring & Evaluation, Surveillance and OR**

The target of 100% of DOTS units having received quarterly feedback reports was reached. The annual analysis of the main TB indicators for 2011 and for Q1 2012, which was part of a national quarterly report was sent to the 16 DOTS centers of the capital and the districts. The analysis focuses on the DOTS units' results compared with the national level and between DOTS units. The analysis also highlights achievements and challenges at national level and by DOTS unit.

### **Drug supply and management**

The target of 100% quarterly quantification and order based on the epidemiological method implemented by all DOTS centers, was reached after training of the DOTS personnel on TB drug management.

## **Introduction**

TBCARE I in Djibouti has as lead partner WHO and the NTP and MOH as collaborating partners. The staff is limited to the country director although he works closely with the NTP central unit staff. The project covers the whole population of Djibouti.

As part of APA2, the project worked in the following technical areas with the total buy-in amount of 250,000 USD:

- Universal access
- Laboratories
- Programmatic Management of Drug Resistant TB (PMDT)
- Health Systems Strengthening
- M&E, OR and Surveillance
- Drug supply and management

In addition to the specific technical areas addressed in the APA, TB CARE I has been providing locally international WHO technical assistance to the National Tuberculosis Programme embracing all the STB Strategy components with involvement in the technical aspects of all other projects and programs addressing TB in the country.

The technical assistance goes beyond TB control to include technical management of public health programs supported by WHO in the country and contribution to the development of national health policies and strategies and to UN support to the national response to priority health problems.

## Universal Access

TB CARE I worked in this area with WHO and the NTP as main partners with the NTP Central Team being provided with permanent technical support in all TB control areas in line with the Stop TB strategy. The GF had a limited contribution in securing salaries for some NTP staff through the Continuation Of Services mechanism.

## Technical Outcomes

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target	Result	Comments
					Y2	Y2	
1.2	Increased quality of TB services delivered among all care providers	1.2.x Central Team maintained with up to date NTP Manager, one Program Assistant, one M&E Officer, two DOTS supervisors, one lab supervisor and international technical assistance	Description: Central Team maintained with up to date NTP Manager and international technical assistance. Indicator Value: Yes /No	Yes (2011)	Yes	Yes	

**Key Achievements** The NTP Central Team is fully functional and composed as planned, of the NTP Manager, one Program Assistant, one M&E Officer, two DOTS supervisors, and one lab supervisor. TB CARE international technical assistance has been provided to the central team. The supervisions were conducted on a regular basis according to schedule by the Central Team with use of TBCAP developed supervision checklist and guide. TB CARE I assisted technically at local level in quality control of the supervision, and financially.

## Challenges and Next Steps

The challenge for the NTP is to sustain its gains after withdrawal of TB CARE and related local technical assistance. The only viable way is to take advantage of the GF R10 TB grant, which has yet to be signed.

Inn this regards, TB CARE I helped in successfully developing the GF proposal and in developing the technical documents for the grant negotiation phase before its signature and ultimately its implementation.

## Laboratories

TB CARE I worked in this area with WHO, the NTP and the Foundation for Innovative Diagnostics (FIND) as main partners to introduce new rapid diagnostic technologies and to establish a Bio Security Level 3 lab in the National TB Reference Laboratory.

### Technical Outcomes

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target	Result	Comments
				Y2	Y2	
2.3 3	2.3.1 New technologies have been introduced	Indicator Value: Number for each technique below by Central, Provincial, district and Peripheral levels 1. TB culture 2. First line DST 3. Second-line DST 4. HAIN MTBDRplus 5. GeneXpert 6. LED microscopy	1(2011)  LED microscopy	5  - GeneXpert - TB culture - first line DST - HAIN - LED microscopy	5	

### Key Achievements

TB CARE I fulfilled the need for the introduction of GeneXpert in order to ensure early diagnosis of smear negative pulmonary cases notably HIV positive persons and children, and early diagnosis of rifampicin resistance among retreatment cases, HIV positive TB suspects and TB suspects among contacts of MDR cases.

GeneXpert has been performed starting from August 2012 with the following results (the information about suspect groups tested is unfortunately missing):

- In August 34 tests were performed
  - No TB detected=25;
  - TB detected=5;
  - RIF resistance detected=4;
  - indeterminate=0.
- In September 102 tests were performed
  - No TB detected=64;

- TB detected=25;
- RIF resistance detected=13; indeterminate=0;
- Erroneous results: 6 because of power failure.

GeneXpert was introduced by TB CARE I while TB culture, first line DST and Hain were introduced by FIND; LED microscopy being already present at the baseline.

TB CARE I fulfilled the need for the introduction of GeneXpert in order to ensure early diagnosis of smear negative pulmonary cases notably HIV positive persons and children, and early diagnosis of rifampicin resistance among retreatment cases, HIV positive TB suspects and TB suspects among contacts of MDR cases.

A 4 module GeneXpert instrument was procured together with 2060 cartridges and related accessories equipment including a computer and a refrigerator.

A 5-day training for setting up and using the GeneXpert instrument by Cepheid was held from 16-20 July 2012. The training was conducted on the web with the participation of all staff from the NRL (5 technicians including one female person).

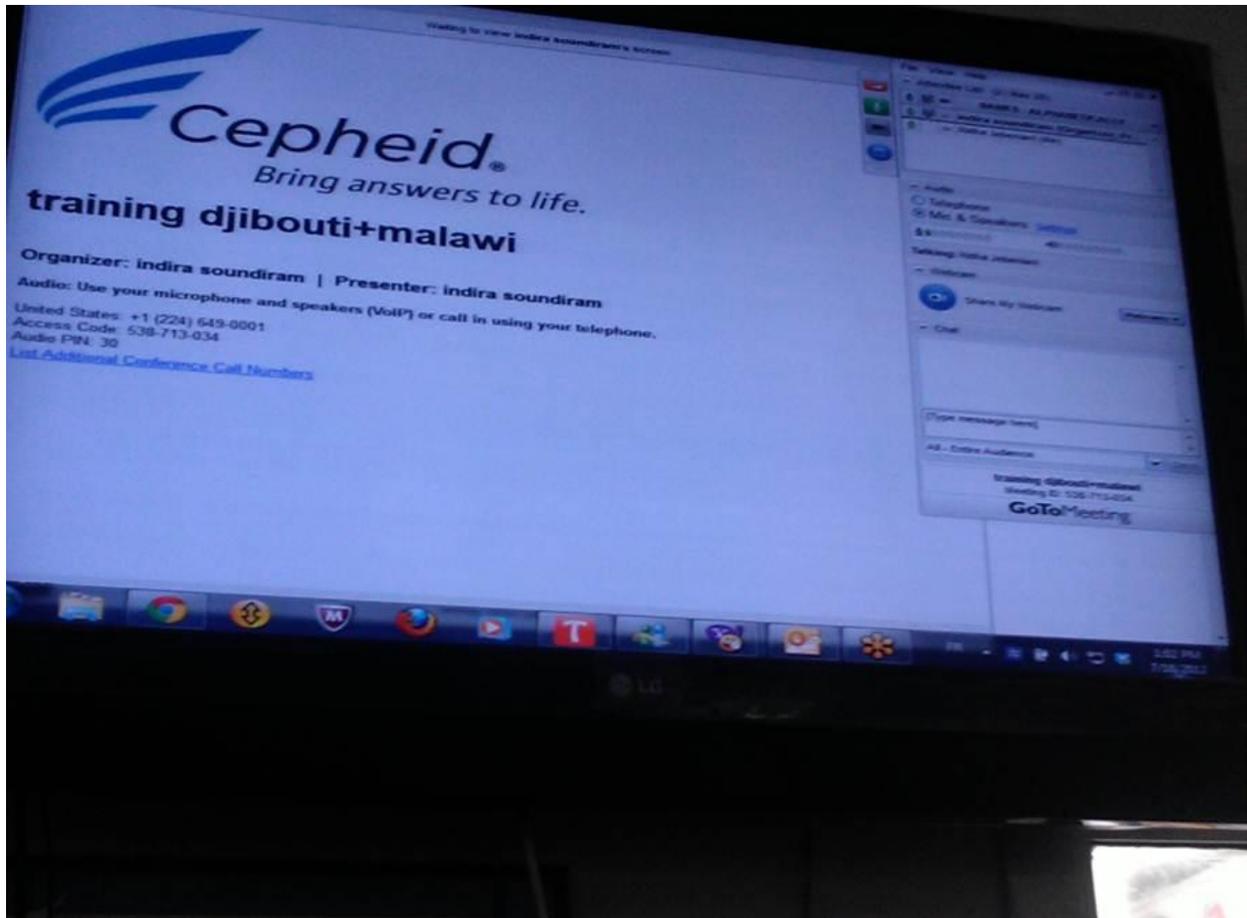
With USAID supported technical assistance an algorithm for diagnosing TB and MDR TB based on new rapid diagnostic technologies was developed.

The head of the National Reference Laboratory and the WHO TB Medical Officer participated in an international training in Mombasa in May 2012 with the technical and financial support of USAID.

A training of doctors on the use of the TB CARE I developed algorithm based on GeneXpert was conducted in July 2012 with the involvement of TB CARE I local technical assistance and the National TB Reference Hospital in the facilitation.



TRAINING OF DOCTORS ON THE GENEXPET ALGORITHM



TRAINING OF LAB TECHNICIANS ON GENEXPERT



GENEXPERT MACHINE AT THE TB NATIONAL REFERENCE LABORATORY

### **Challenges and Next Steps**

The challenge is to sustain availability of cartridges after TB CARE I's withdrawal. The only option is through GF Round 10 TB which is expected to start on January 2013.

## Programmatic Management of Drug Resistant TB (PMDT)

TB CARE I worked in this area with WHO, the NTP, the International Union Against Tuberculosis and Lung Diseases and the Foundation for Innovative Diagnostics (FIND) as main partners to introduce new rapid diagnostic technologies including GeneXpert, to develop a national protocol for MDR TB case management and to develop an algorithm for MDR TB diagnosis and treatment.

### Technical Outcomes

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target	Result	Comments
					Y2	Y2	
4.1	Improved treatment success of MDR	4.1.x Percentage of MDR TB patients enrolled on second line treatment according to the national protocol	Description: Indicator Value: percentage Level: National Source: MDR recording and reporting system Means of Verification: regular supervision Numerator: number of MDR TB patients enrolled on second line treatment according to the national protocol among those diagnosed Denominator: Number of MDR TB patients diagnosed	0/8=0% (2010)	100%	37%	In the absence of GF funds to purchase second line drugs, some patients were detected and enrolled on MDR treatment using the Union endorsed Bangladesh protocol. This was on the own initiative of the National TB Reference Center without the endorsement of the NTP, and WHO, which does not recommend this protocol for routine use.

### Key Achievements

The NTP managed to establish some prerequisites for functioning PMDT establishing rapid diagnostic technologies, developing diagnostic algorithm for TB and MDR TB based on GeneXpert, and establishing a consensual PMDT guidelines which will be drafted in French as part of an MDR TB manual in next December with TB CARE I assistance.

## Challenges and Next Steps

In the absence of GF funds to purchase second line drugs, some patients were detected and enrolled on MDR treatment using the Union endorsed Bangladesh protocol. This was on the own initiative of the National TB Reference Center without the endorsement of the NTP, and WHO, which does not recommend this protocol for routine use.

The TB CARE I training on MDR case management is scheduled in December 2012 and the GF R10 is expected to start on the 1st of January 2013. This hopefully will enable the NTP to implement the WHO endorsed national treatment protocol.

## Health System Strengthening (HSS)

TB CARE I worked in this area with WHO, the World Bank and the NTP as main partners. During the first quarter, when TB CARE I funds were not yet made available, supervision activities in the capital were conducted using World Bank funds.

TB CARE I was instrumental in filling the financial gap arising from the cancellation of the second phase of GF R6 TB, allowing the NTP to carry out supervisory visits nationwide.

## Technical Outcomes

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target	Result	Comments
				Y2	Y2	
6.2 TB control components (drug supply and management, laboratories, community care, HRD and M&E) formed integral part of national plans, strategies and service delivery of these components	6.2.1 Supervisory visits conducted according to country supervisory standards	Indicator Value: Percent Numerator: Number of annual supervisory visits conducted disaggregated by three levels. Denominator: Number of annual supervisory visits planned disaggregated by three levels.	National: 120/140=86% (2010)	National : 140/140=100%	135/140 = 96%	The target for the year is 140 visits. However 5 planned visits to the districts during the first quarter could not be conducted for reasons of lack of funds at that time. Therefore 135 visits out of 140 were conducted. This type of indicator cannot be caught up as the 5 visits were supposed to be conducted in the first quarter.

## Key Achievements

Supervision activities were conducted regularly using the TB CAP developed supervisory checklist with quality checked by WHO/TB CARE I TB officer.

The supervisions were supported technically (checklist and supervision guide) and financially by TB CARE I.

The DOTS personnel improved their maintenance of the TB register and the lab registers and their capacity to manage TB drugs.

As per the treatment outcomes, the next cohort analyses for 2012 will show whether the treatment outcomes have improved.

### Challenges and Next Steps

The supervision activities in the districts (supervisory visits to the DOTS structures in the districts) have been fully implemented during the last three quarters, after the challenges resulting from the lack of funds experienced during the first quarter. During the first quarter the Programme was not able to conduct supervision visits to the districts.

In the future the supervision activities will be carried on with GF R10 TB funding.

### Monitoring & Evaluation, Surveillance and OR

TB CARE I worked in this area with WHO and the NTP as main partners and allowed the NTP to establish for the first time ever a feedback system to lower levels.

### Technical Outcomes

Expected Outcomes	Outcome Indicators	Indicator Definition	Baseline (Year or time-frame)	Target	Result	Comments	
				Y2	Y2		
7.2	Improve capacity of NTPs to analyze and use quality data for management of the TB program	7.2.2 NTP provides regular feedback from central to lower levels	Indicator Value: Percent per quarter Numerator: Number of quarterly feedback reports prepared and disseminated disaggregated by three levels. Denominator: Total number of recipient units/facilities at each level	0/16=0% (2011)	16/16 =100 %	16/16 TB management units =100 %	.

### Key Achievements

A new tradition has been introduced to the NTP by TB CARE I with, for the first time ever, the NTP is sending feedback reports to lower levels.

The annual analysis of the main TB indicators for 2011 and for Q1 2012, which was part of a national quarterly report was sent to the 10 DOTS centers of the capital and is being distributed, by the time of reporting to the 5 other districts (The districts constitute the

lowest level in relation to the national level. This level includes the 16 TB management units. The analysis focuses on the TB management units' results compared with the national level and between TB management units. The analysis also highlights achievements and challenges at national level and by TB management unit.

### Challenges and Next Steps

The distribution of the reports to the rural districts took time because of logistical limitations faced by the NTP.

The way out for the NTP is the GF R10 TB grant, which is expected to be implemented starting 1<sup>st</sup> January 2013. The procurement of vehicles for the NTP is scheduled in the project.

As mentioned before, TB CARE I helped in successfully developing the GF proposal and in developing the technical documents for the grant negotiation phase before its signature and ultimately its implementation.

### Drug supply and management

TB CARE I worked in this area with WHO, GDF, the GF and the NTP as main partners with the NTP Central Team being provided with technical support in managing TB drugs from quantification to distribution and use.

### Technical Outcomes

Expected Outcomes		Outcome Indicators	Indicator Definition	Baseline (Year or timeframe)	Target Y2	Result Y2	Comments
8.1	Ensured nationwide systems for a sustainable supply of anti-TB drugs	8.1.4 Quarterly quantification and order based on the epidemiological method implemented by all DOTS centers	Indicator Value: Number and percentage Level: National Source: NTP records Means of Verification: NTP Central Pharmacy records Numerator: Number of DOTS centers performing quarterly quantification and order based on the epidemiological method Denominator: Total number of	0/15=0% (2011)	15/15=100%	15/15=100%	

			DOTS centers				
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### Key Achievements

The programme uses the epidemiological method to quantify drugs needs at TB basic management unit level.

This was after training of the DOTS personnel on TB drug management with TB CARE I technical and financial support.

Before this, the quantification of needs were only based on the consumption method, which is not as accurate as the quantification based on epidemiological data, i.e. on the number of patients in each treatment category.



TRAINING OF DOTS PERSONNEL ON TB DRUG MANAGEMENT

### Challenges and Next Steps

TB drugs are expected to be purchased through GF TB R10 and GF implementers are to build on TB CARE I achievements to make sure that TB drug management is up to international standards.