East, Central & Southern Africa Health Community (ECSA-HC)

REPORT

PROGRAMMATIC MANAGEMENT OF DRUG RESISTANT TB (PMDT)
MISSION TO TANZANIA

30 September – 4 October, 2013

Report by

Dr. Stephen K. Muleshe, Program Manager, HIV/AIDS/TB & Other Infectious Diseases
Ms. Ann Masese, Program Officer, HIV/AIDS/TB & Other Infectious Diseases
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<tr>
<td>ACSM</td>
<td>Advocacy, Communication &amp; Social Mobilization</td>
</tr>
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<td>AIDS</td>
<td>Acquired Immunodeficiency Syndrome</td>
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<tr>
<td>ART</td>
<td>Anti-Retroviral Treatment</td>
</tr>
<tr>
<td>ARVs</td>
<td>Anti-retrovirals</td>
</tr>
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<td>CNR</td>
<td>Case Notification Rate</td>
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<td>CPT</td>
<td>Cotrimoxazole Preventive Therapy</td>
</tr>
<tr>
<td>DOTS</td>
<td>Directly Observed Treatment Short Course</td>
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<tr>
<td>DR</td>
<td>Drug Resistance</td>
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<td>DR-TB</td>
<td>Drug Resistance TB</td>
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<td>DRS</td>
<td>Drug Resistant Survey</td>
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<td>NTLP</td>
<td>National TB and Leprosy Program</td>
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<td>DST</td>
<td>Drug Susceptibility Testing</td>
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<tr>
<td>ECSA</td>
<td>East, Central &amp; Southern Africa Health Community</td>
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<tr>
<td>EQA</td>
<td>External Quality Assurance</td>
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<tr>
<td>GLC</td>
<td>Green Light Committee</td>
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<tr>
<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>HMC</td>
<td>Health Ministers Conference</td>
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<tr>
<td>IEC</td>
<td>Information, Education &amp; Communication</td>
</tr>
<tr>
<td>IOM</td>
<td>International Organization for Migration</td>
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<tr>
<td>IPC</td>
<td>Infection Prevention &amp; Control</td>
</tr>
<tr>
<td>IPT</td>
<td>Isoniazid Preventive Therapy</td>
</tr>
<tr>
<td>ISTC</td>
<td>International Standards for Tuberculosis Care</td>
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<td>KNCV</td>
<td>Royal Netherlands TB Foundation</td>
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<tr>
<td>LPA</td>
<td>Line Probe Assay</td>
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<tr>
<td>LED</td>
<td>Light-emitting diode</td>
</tr>
<tr>
<td>LMIS</td>
<td>Laboratory Management Information System</td>
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<tr>
<td>MDR-TB</td>
<td>Multi-Drug Resistance TB</td>
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<td>NTRL</td>
<td>National TB Reference Laboratory</td>
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<tr>
<td>OR</td>
<td>Operational Research</td>
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<tr>
<td>PAL</td>
<td>Practical Approach to Lung Health</td>
</tr>
<tr>
<td>PLHIV</td>
<td>People Living with HIV</td>
</tr>
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<td>PMDT</td>
<td>Programmatic Management of Drug Resistance TB</td>
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<td>PPM</td>
<td>Public Private Mix</td>
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<td>QA</td>
<td>Quality Assurance</td>
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<td>SLDs</td>
<td>Second Line Drugs</td>
</tr>
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<td>TB</td>
<td>Tuberculosis</td>
</tr>
<tr>
<td>TAT</td>
<td>Turn around time</td>
</tr>
<tr>
<td>TBCARE</td>
<td>TB Collaboration/Coordination/Access/Responsiveness and Evaluation Program</td>
</tr>
<tr>
<td>TSR</td>
<td>Treatment Success Rate</td>
</tr>
<tr>
<td>UNION</td>
<td>International Union against TB &amp; Lung Disease</td>
</tr>
<tr>
<td>USAID</td>
<td>United States Agency for International Development</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organization</td>
</tr>
<tr>
<td>XDR-TB</td>
<td>Extensively Drug Resistant TB</td>
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</table>
Acknowledgement

The Permanent Secretary Ministry of Health and Social Welfare, United Republic of Tanzania for granting us approval to visit the National Tuberculosis and Leprosy Program to conduct the monitoring mission.

Special gratitude goes to the Ag. Program Manager at the National TB and Leprosy Program Dr. V. Kamala and the Director of Kibong’oto TB Hospital Dr. L. Mleoh for the tremendous support they offered us through their staff in facilitating visits to different departments, organizations and facilities where we were able to gather most of the information to help us attain our objectives. We also sincerely thank Dr. J. Lymo, Dr. R. Kisonga and Dr. V. Mboneko who played a key role in coordinating our activities during the mission.

We acknowledge staff at the Kibong’oto TB Hospital, the Central Reference Laboratory, Tanzania Food and Drugs Authority (TFDA), PATH who are supporting the Program in TB activities, Temeke and Ilala health facilities and the patients from these health facilities for sharing their valuable time and insights with us during the field visits.

Finally ECSA-HC acknowledges its collaborating Partner KNCV for providing both technical and financial support for this mission.

Dr. Stephen K. Muleshe
Program Manager, HIV/AIDS, TB & ORID
East, Central and Southern Africa, Health Community (ECSA-HC)
1.0 INTRODUCTION

The East, Central and Southern African Health Community (ECSA-HC) with support from KNCV undertook a monitoring mission to the United Republic of Tanzania 30th September to 3rd October 2013 in line with the resolutions passed by the ECSA Health Ministers during their 52nd conference held in Harare, Zimbabwe in 2010.

The main goal of the mission was to determine the extent to which Tanzania has implemented PMDT especially in view of the resolutions passed by HMC in the last 10 years. The mission was undertaken by Dr. Stephen K. Muleshe, the Program Manager HIV/AIDS/TB & other Infectious Diseases, and Ms. Ann Masese the Program Officer.

This report gives a brief background of the TB/MDR TB situation both globally and regionally and also the TB/MDR TB situation in Kenya. It highlights the objectives of the mission, key findings and recommendations.

2.0 BACKGROUND

2.1 Global & Regional TB/DR-TB Situation

Drug-resistant tuberculosis, and particularly Multi-Drug Resistant Tuberculosis (MDR-TB) and Extensively Drug Resistant Tuberculosis (XDR-TB), is a momentous threat to TB control due to the limited treatment options available. The situation is worsened by the HIV epidemic and cross border transmission of drug resistant strains of Mycobacterium from neighboring countries.

Globally according to WHO Global TB Report of 2013, there were an estimated 8.6 million new TB cases in 2012 and 1.3 million died from the disease, 6.1 million cases of TB were notified to national TB programmes (NTPs). An estimated 450 000 people developed MDR-TB and of these, an estimated 9.6% have XDR-TB. Only 48% of MDR-TB patients in the 2010 cohort of detected cases were successfully treated. Most of the ECSA countries are among the 22 high TB burden countries and most of these countries have reported Extensively drug resistant cases (XDR-TB).

2.2 TB/DR TB Situation in Tanzania

2.2.1 Drug Sensitive TB

Tanzania is among the 22 high burden TB countries with TB being the 3rd cause of adult morbidity and mortality in the country after Malaria and HIV/AIDS. According to the 2012 Population and Housing Census report, the country had a population of 44.9 Million people in 2012. A total of 63,892 cases were notified, the case notification rate was 142/100000 populations. The TB Prevalence according to the just concluded National Prevalence Survey was 295/100000 population. The TB case detections rate was at 77% in 2012, the incidence was at 165/100000 and the treatment success rate was 89%.
Figure 1: **TB Case notification in Tanzania from 1979 – 2012**
The graph below shows the trends in TB case notification in Tanzania over the years.

![Graph showing TB case notification in Tanzania from 1979 to 2012](image)

Figure 2: **TB Case finding in Tanzania from 2005-2012**
The graph below shows the case finding over the years

![Graph showing TB case finding in Tanzania from 2005 to 2012](image)

Source: NTLP data, Tanzania
2.2.2 Drug Resistant TB (DR-TB)

According to WHO 2013 global report, it is estimated that Tanzania has 1.1 % prevalence of MDR-TB. In 2011 there were an estimated 500 MDR-TB cases among notified pulmonary TB cases. A national drug resistant survey (DRS) was done in 2006/2007 showed an MDR-TB prevalence of 1.1% among new cases and 3.1% among retreatment cases. The country plans to strengthen its surveillance as opposed to conducting another Drug Resistant Survey. Surveillance for Drug Resistant TB is being done in the country with the main focus on retreatment cases and high risk groups. A total of 155 patients had been started on treatment up to June 2013. There were 33 patients on treatment as at June 2013.

3.0 RATIONALE

M/XDR-TB poses a real threat to global and regional public health security and efforts to reduce the global and regional burden of tuberculosis. The Beijing Call for Action on Tuberculosis Control and Patient Care, and the World Health Assembly resolution on prevention and control of M/XDR-TB recognize the challenges posed by M/XDR-TB and call for urgent action to address the situation.

Adequate and timely treatment of TB is the most effective way to reduce the further emergence of acquired drug resistance. In addition, the transmission of M/XDR-TB can be reduced by early diagnosis, treatment and adequate infection control measures. For this reason, the national TB control programs (NTPs) need to integrate Programmatic Management of Drug-Resistant TB (PMDT) into routine activities and to link up with private providers, hospitals, and congregate settings such as prisons to ensure a comprehensive response to the M/XDR-TB threat.

The rationale for the ECSA-HC monitoring mission is to work closely with Member States’ National TB Programs in identifying the processes that have been undertaken in response to the challenges of M/XDR-TB while documenting best practices and lessons learnt with the sole aim of determining innovative strategies and interventions for improving laboratory capacity for diagnosis of M/XDR TB; accessibility to treatment for M/XDR TB, strengthening the implementation of the DOTS strategy, PMDT and advocacy for involvement of communities in prevention & control of TB with the view of supporting Member States to effectively implement these strategies and interventions.

4.0 OBJECTIVES

The mission had four specific objectives to: -
1. Share with the NTP and the Ministry of Health Officials information about ECSA-HC & the HIV/AIDS/TB & ID program;
2. Assess the implementation of the ECSA Health Ministers conference (HMC) Resolutions on TB /MDR TB;
3. Document best practices/lessons learnt in implementation of the HMC Resolutions on TB & PMDT; and
4. Identify/Understand challenges/gaps in service provision related to implementation of the resolutions, PMDT and corresponding strategies.
5.0 APPROACH

During the mission, the team held briefing meeting with the Director of Kibong’oto TB hospital and later the NTP manager and the PMDT focal person. The team then visited various departments within the Kibong’oto TB Hospital and later other institutions where Key Informant interviews were conducted with health care workers managing TB Patients, Senior Officers at the various institutions and facilities visited. Interviews were also conducted on patients currently on MDR-TB treatment at Temeke and Ilala health facilities.

The mission was conducted from 30 September to 4 October 2013 by the Manager and Programme Officer HIV/AIDS, TB and Infectious Diseases Programme of ECSA-HC.

The mission employed the following approach to gather the required information: -
1. Completion of a questionnaire/tool on ECSA HMC Resolutions on TB/MDR TB;
2. Key Informant interviews with relevant senior managers at the Ministry of Health, National TB & HIV/AIDS Programme, selected facility supervisors at national level and implementing partners;
3. Review of key program documents including registers, reports, summaries, guidelines, IEC materials; and
4. Observation during the departmental and field visits.

6.0 FINDINGS

The ECSA HMC resolutions on TB, M/XDR TB & HIV and the six stop TB strategies were used as the basis for the assessment. The ECSA Health Ministers conference for the last ten years has passed ten resolutions related to TB & HIV (See Annex 1). On the other hand, the stop TB Strategy 2006-2015 clearly stipulates the key interventions TB programs should adopt for successful prevention and control of TB with the aim of achieving the 2015 targets. The resolutions were mainly based on the global TB strategy.

6.1 PURSUING HIGH-QUALITY DOTS EXPANSION

6.1.1 Secure political commitment, with adequate and sustained financing

Findings
Tanzania has a total budget of US$ 58 Million for TB control activities; only 33% of this is funded with less than half of this budget coming from domestic sources. The Government of the United Republic of Tanzania is committed to the prevention and control of TB through its direct support to the NTP. The government has a budget line for TB activities in the national budget; it was reported that this has steadily increased over the years. The NTP has adequate funding with most of the staff working in the NTP employed by the government. Major positions in the program are also filled. The program has a National Strategic Plan for the period 2009 – 2015. National MDR-TB guidelines are in place.

Tanzania gets support from the Global Fund with the Ministry of Finance being the principle recipient. The other partner is PATH which provides support in TB/HIV activities, capacity
building, laboratory strengthening and development of policies, training materials and monitoring tools.

**Recommendations**  
In view of the challenges and gaps noted, the mission makes the following recommendations:

i. Continue advocacy for mobilization of domestic resources to support TB Services

ii. Government should have a dedicated budget for anti-TB drugs in the country

**6.1.2 Ensure early case detection and diagnosis through quality-assured bacteriology**

**Findings**

Tanzania has a National TB reference laboratory located in Dar-es-Salaam within the Muhimbili Health & Allied Sciences (MUHAS) premises. This laboratory is co-owned by the Ministry of Health and the National Institute for Medical research (NIMR) and receives support from the World Bank and PATH. The Central TB Reference Laboratory (CTRL) is the only laboratory that is doing culture in the country. The laboratory is linked to the Supranational laboratory in Antwerp for EQA; the last round of panels sent was round 19 in 2013 with overall efficiency of H-100%, R – 95%, S – 100%, E-95%. The role of the CTRL is to; conduct routine TB Drug resistance surveillance, proficiency testing for microscopy, culture and DST, conduct trainings, implement new policies and advice the program on new techniques, initiate change in algorithms and participate in operational research.

The CTRL does smear microscopy, culture, LPA, Gene Xpert MTB/rif as well as both first and second line DST. There are a total of 945 laboratories diagnosing TB in the country. There are 17 Gene xpert MTB/Rif machines in the country however; only 5 are being used for patient management the rest are used for research purposes. There is no roll out plan in place for Gene Xpert/MTB Rif despite the fact that there are plans to procure more machines. The laboratory in Mbeya the southern region will be strengthened to start doing culture and DST and this will hopefully reduce the burden in the CTRL and reduce the turnaround time for results. Currently three Zonal laboratories are performing LPA, liquid culture is done in 3 laboratories however two of them were not functional at the time of the mission. Specimen referral is done by the postal offices (EMS); this is partly supported by PATH in some regions. The turnaround time has been so long with health centers reporting that they get culture results even up to 3-4 months.

We noted that the staff in the CTRL is overwhelmed as they have to do both clinical work and research work making the samples a nightmare to process and this delays the whole process. EQA is being done in only 7 regions in the country; there are plans to scale this up to the entire country.

The laboratory carries out MDR-TB Surveillance which started in 2009 in the country; this is done on retreatment cases. There is no LMIS system in place; a web based system is being developed for reporting on results and this will hopefully reduce the turnaround time for the tests. Generally the NRL has dedicated trained staff. There is constant supply of quality reagents with no reported shortage in the past one year. The laboratory environment is clean and well
organized. Infection control measures are in place with the staff adhering to them. SOPs are available and are well displayed in the laboratory.

**Recommendations**
The following are the recommendations;

i. Strengthen proficiency testing for External Quality Assurance

ii. Develop a roll-out plan and scale up Gene Xpert MTB/Rif technology in the country to increase case

Finding

iii. Functionalize equipment at Kibong’oto Hospital and Mbeya district

iv. The CTRL should endeavor to reduce the long turnaround times

v. Install and utilize the LMIS and network the laboratories in the country

**6.1.3 Provide standardized treatment with supervision, and patient support**

**Findings**

Tanzania was the first country in the world to implement Directly Observed Therapy Short Course (DOTS) strategy for TB control. There is universal coverage of TB DOTS in all districts. Treatment for TB is free in all facilities in the country. Treatment for MDR-TB is based on the WHO recommended standard regimen. The country uses hospital based DOTS with all patients on treatment receiving their DOTS in a nearby health facility during the continuation phase; patients are admitted throughout the intensive phase. The health care workers actively screen for side effects which are managed as soon as possible; drugs to manage side effects are available to the patients when required.

MDR-TB patients on treatment are not provided with socio-economic support by the program as yet.

**Recommendation**
The following are the recommendations;

i. Provide socio-economic support to the needy patients

ii. Establish a community support system for patients who are not able to access the health facilities

**6.1.4 Ensure effective drug supply and management**

**Findings**

The NTLP has adopted the direct procurement of Second line anti-TB drugs by the Global Fund through GDF. Once in the country, they are then transported to Kibong’oto hospital pharmacy/warehouse for central storage and distribution to the health facilities. The program has not reported any stock outs of SLD in the past 12 months prior to the mission.

The drug store at Kibong’oto is small and congested. Temperatures are maintained at the optimum level with evidence of temperature recording. The program carries out an annual focused quantification for the drugs.
The Tanzania Food and Drugs Administration (TFDA) is responsible for ensuring quality of medicines. Analysis of medicines is done at the TFDA Laboratory for first line anti TB drugs only. Post market surveillance has been done for first line anti TB drugs but not the SLD. There is a pharmacovigilance system in place however, not very strong.

Recommendations
The following are the key recommendations;
   i. Strengthen pharmacovigilance in the country and put in place pharmacovigilance guidelines
   ii. Train health care workers on pharmacovigilance for both FLDs & SLDs
   iii. Enlarge the medical store at Kibong’oto to ensure adequate space and ventilation

6.1.5 Monitor and evaluate performance and impact

Findings
The program has a monitoring and evaluation (M&E) system in place with a focal point for M&E. Data is regularly collected, analyzed and updated in an organized manner through the District TB and Leprosy coordinators, then to the Regional TB and Leprosy Coordinators who finally relay this data to the M&E Focal person at the national level. The NTLP has managed to work closely with the private sector which notifies patients to them. The country has just completed its first National Tuberculosis Prevalence Survey with a preliminary report out.

Recommendations
The following are the recommendations;
   i. Maintain regular recording and reporting on TB, MDR-TB
   ii. Disseminate the report of the Prevalence Survey to all the stakeholders

6.2 ADDRESSING TB/HIV, MDR-TB AND OTHER CHALLENGES
6.2.1 Scale–up collaborative TB/HIV activities

Findings
The program has a focal person for TB/HIV activities. Guidelines for implementing TB-HIV Collaborative activities are in place. In 2012, 82% of TB patients were tested for HIV, 54% of HIV positive TB patients were put on ART and 96% were put on CPT. The TB/HIV co infection rate is 31% for susceptible TB according to the just concluded 2013 TB Prevalence survey and 48% for MDR-TB as at June 2013. The table below shows some of the TB/HIV key indicators from 2007 to 2012;

Figure 3: Key TB/HIV indicators from 2007-2012
There is active screening of TB in PLHIV. IPT is being offered in only 23 sites in the country. There are no IPT guidelines however there is a protocol to offer guidance. There are TB IC guidelines in place; facilities visited had facility specific IC plans. IC Measures were in place, with patients waiting areas being very well ventilated and PPE was available.

**Recommendations**
The following are the recommendations;

i. Develop IPT Guidelines and roll out provision of IPT to the entire country

ii. All TB/HIV patients should be put on ART within the WHO recommended period

iii. TB/HIV collaboration should be strengthened at all levels

### 6.2.2 Scale-up prevention and management of multidrug-resistant TB (MDR-TB)

**Findings**
Treatment of Drug resistant TB started in 2009. Before treatment commenced following the findings of the 2006 DRS, staff at Kibon’goto TB hospital were trained on the management of MDR-TB and in 2007 the country got approval from GLC to treat 50 patients. The country also started developing country guidelines and monitoring tools in 2007. A total of 155 patients had been started on treatment up to June 2013. There were 33 patients currently on treatment as at June 2013.

The graph below shows the trend of MDR TB patient enrolment since 2009 to June 2013.

![Graph showing trend of MDR-TB patient enrolment](source NTLP, Tanzania Data)

**Figure 4: Trend of MDR-TB patient enrolment, 2009 to June 2013**
All Patients on MDR-TB treatment are initiated on treatment only at the Kibong’oto TB Hospital, thereafter they are hospitalized throughout the intensive phase. During the continuation phase the patients are transferred to the nearest facility and are followed up on a daily basis to receive their DOT. The program is at advanced stages of decentralizing MDR-TB treatment initiation to four centers; Dar es Salaam, Mwanza, Dodoma and Mbeya.

Tanzania is using the standardized WHO regimen for treatment. Second line drugs are procured directly through the GDF with support from Global Fund. The country has not experienced stock out of medication in the past one year. New diagnostic techniques have been adopted in the country and these include: the Gene Xpert MTB/RIF, Line Probe Assay and liquid cultures; drug susceptibility testing (DST) for both first and second line drugs are being done. These new diagnostic techniques have however not been rolled out to reach as many people as possible. Treatment outcomes for MDR-TB improved slightly in 2010 as compared to 2009 as shown below:

Table 1: Treatment outcomes for 2009 and 2010

<table>
<thead>
<tr>
<th>Outcomes</th>
<th>2009, n=15 (36 mo.)</th>
<th>%</th>
<th>2010, n=20 (24 mo.)</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Died</td>
<td>3</td>
<td>20</td>
<td>3</td>
<td>15</td>
</tr>
<tr>
<td>Defaulted</td>
<td>0</td>
<td>0</td>
<td>2*</td>
<td>10</td>
</tr>
<tr>
<td>Failure</td>
<td>1**</td>
<td>7</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Completed</td>
<td>2</td>
<td>13</td>
<td>2</td>
<td>10</td>
</tr>
<tr>
<td>Treatment</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Cured</td>
<td>9</td>
<td>60</td>
<td>13`</td>
<td>65</td>
</tr>
<tr>
<td>Treatment success</td>
<td>11</td>
<td>73</td>
<td>15</td>
<td>75</td>
</tr>
</tbody>
</table>
The national TB Program has a focal person to coordinate the MDR-TB activities. The country is not planning to conduct a Drug Resistant Survey (DRS) but will strengthen its surveillance system and rely on this to give the true burden of the disease. The last Drug Resistant Survey was carried out in 2006/7 as reported above.

Health care workers are not routinely screened for TB; most health care workers in Kibong’oto Hospital have been trained both locally and internationally on the management of MDR-TB. The program uses facility based DOTS, once patients are discharged after the intensive phase; they go to the nearest health facility on a daily basis to receive their DOT. The program and the major facilities offer mentorship, supervision and training to the other peripheral treatment centers. Management of TB in children is a big challenge for the program.

**Recommendations**

i. Realize the plans to decentralize MDR-TB Services  
ii. Continue training and mentoring health care workers in MDR-TB management  
iii. Routinely screen health care workers for TB  

**6.3 ADDRESS THE NEEDS OF TB CONTACTS, AND POOR AND VULNERABLE POPULATIONS**

**Findings**  
Contact tracing and screening is done by the program. IPT is administered to children less than five years who are contacts of TB patients. All prisons in Tanzania have health care coordinators who report TB cases to the NTLP. TBREACH is implementing a project in the prisons. There are numerous mines in Tanzania and Kibong’oto hospital reported to have received quite a substantial number of TB patients from these mines some with extensive lung damage, however the real magnitude is not known. The NTLP is at preliminary stages of engaging the mining sector on this issue. The program has started talks with the Ministry of immigration and the International Organization for Migration (IOM) to help tackle the cross border TB issues.

**Recommendations**

i. All children under five years and are contacts of TB patients with no active disease should be commenced on IPT  
ii. Scale up IPT in the country  
iii. Establish the magnitude of TB in the mines and strengthen the engagement of the mining sector  
iv. Engage intergovernmental organizations that are tackling migration and TB

**6.4 Contributing to health system strengthening**

**6.4.1 Help improve health policies, human resource development, financing, supplies, service delivery and information**

**Findings**
There is a National TB Policy and a national TB Strategic Plan 2009-2015 in place. National TB Guidelines, MDR-TB and IPC Guidelines are in place. There are core health care workers at all levels in the health sector. The capacity to manage MDR-TB among health workers has really been strengthened with majority of those handling MDR-TB patients having been trained at the Kibong’oto TB Hospital.

**Recommendations**

i. Increase domestic resource mobilization  
ii. Continue Training a large pool of health care workers in the country to manage TB and MDR-TB  
iii. Revise the pre-service curriculum of health care training institutions to reflect current TB control strategies

### 6.4.2 Strengthen infection control in health services, other congregate settings and households

**Findings**

With the IPC guidelines in place, Infection Control (IC) measures were being implemented in the three health facilities visited, each facility has a TB IC plan in place. This needs to be implemented in other congregate settings e.g. prisons.

**Recommendations**

i. Screening of Prisoners to be done at admission using the TB screening tool  
ii. Implement IC measures in other congregate settings e.g. Prisons and households especially in the slum areas  
iii. Increased training of Health care Workers on TB IC

### 6.4.3 Upgrade laboratory networks, and implement the Practical Approach to Lung Health (PAL)

**Findings**

The reference laboratory has modern diagnostics in place e.g. LED microscope, liquid (MGIT), and solid media (L-J) cultures, Xpert MTB/Rif machines and Line Probe Assay (LPA) with short TAT. The laboratories in the country are not yet networked; there is no LMIS in place. The East Africa Public Health Laboratory Networking Project funded by the World Bank is working towards strengthening the NRL and four other labs in the country to ensure that they get accreditation. Implementation of PAL was being implemented in the facilities visited however this needs to be improved.

**Recommendations**

i. Develop guidelines and train Health workers on Implementation of the Practical Approach to Lung Health (PAL)

### 6.4.4 Adapt successful approaches from other fields and sectors, and foster action on the social determinants of health
**Findings**
TB health services are available to all the citizens free of charge in both the public and private sector.

**Recommendations**
- There is need to address the plight of poor TB patients through socio-economic support
- The government should consider introducing a Social Health Insurance scheme for the entire country

**6.5 ENGAGING ALL HEALTH CARE PROVIDERS**

**6.5.1 Involve all public, voluntary, corporate and private providers through Public-Private Mix (PPM) approaches**

**Findings**
There is a PPM focal point in the program. The Private sector is greatly involved in the diagnosis and management of TB patients; they diagnose and treat a substantial number of TB patients. In 2012, 6% of patients notified to the NTLP were from the private sector and 16% from the faith based organizations. The NTLP has a budget line for the private sector, the program greatly supports them in strengthening their laboratories, purchase of reagents, laboratory supplies and microscopes; they have refurbished some laboratories and conducted training for the health care workers in private sector.

**Recommendations**
- Develop and implement a PPM strategy
- Strengthen partnership with the private sector

**6.5.2 Promote use of the International Standards for Tuberculosis Care (ISTC)**

**Finding**
Most elements of ISTC are implemented.

**Recommendation**
- Elements of ISTC should be updated and availed to all clinicians at the TB Clinics

**6.6 EMPOWER PEOPLE WITH TB, AND COMMUNITIES THROUGH PARTNERSHIP**

**6.6.1 Pursue advocacy, communication and social mobilization**

**Findings**
There are ACSM guidelines in place. The program carries out TB advocacy in the community to sensitize the public on TB, its prevention and management. The program also carries out campaigns in the country and also through the media on the management of TB. It has also developed IEC pamphlets and posters that are displayed in the TB Clinic.

**Recommendation**
- Implement the ACSM Strategy
- Disseminate TB/HIV IEC material

**6.6.2 Foster community participation in TB care, prevention and health promotion**
**Findings**

There is a social group (Mukikute Initiative) in the country made up of former TB patients, this group offers support and counseling to patients on treatment, they assist in contact tracing, development and dissemination of IEC material and advocacy. Each district has at least one social TB group. Through this initiative case detection has gone up and the good treatment outcomes have really improved while the bad outcomes have declined. Traditional healers are also being used by the program to sensitize people on TB and refer them to hospital for appropriate management.

**Recommendation**

i. Intensify health education in the community on TB prevention, control and management

ii. Continue fostering community participation in TB case finding and management

### 6.6.3 Promote use of the Patients' Charter for Tuberculosis Care

**Findings**

Some elements of the patient charter are being implemented. The charter was available in some health facilities and not others.

**Recommendations**

i. Sensitize the health care workers on the patient charter and avail it in all health facilities

### 6.7 ENABLING AND PROMOTING RESEARCH

#### 6.7.1 Conduct programme-based operational research

**Findings**

The NTLP successfully conducted a nationwide TB Prevalence survey this year, the preliminary report is out awaiting the final report that was being printed during the time of the mission. A number of organizations in conjunction with the NTLP are conducting TB related research. It was noted that there is no research agenda in the program and no focal person to coordinate research activities.

**Recommendations**

i. Develop a national TB Research agenda and share with the research organizations and collaborating partners

ii. Assign a dedicated focal person within the program to coordinate research activities

iii. Train program staff on Operational Research

#### 6.7.8 Advocate for and participate in research to develop new diagnostics, drugs and vaccines

The program is not currently participating in any research on new diagnostics, drugs and vaccines.
7.0 MAJOR GAPS & CHALLENGES
Despite gains made in the National TB program, there are some gaps and challenges that were identified;

7.1 Laboratory Aspect
The laboratory needs to be strengthened and services need to be decentralized to reduce the burden on the CTRL. There is a long turnaround time for results especially for culture. Diagnostic machines are available; however they are not functional in some facilities. The Gene Xpert MTB/Rif machines in the country for patient diagnosis are very few (5) this needs to be scaled up and distributed through the entire country. This could be having an impact on the current case detection. There is no LMIS system in place.

7.2 Decentralization of MDR-TB Services
Initiation of MDR-TB treatment is only done at the Kibong’oto Hospital. This causes huge inconveniences for people who stay far away from the Kilimanjaro Region e.g in Mbeya region; these two regions are more than 1,000km apart. This will involve training health personnel in all cadres on management of MDR-TB including drug management. Plans are underway for decentralization; this needs to be fast tracked

7.3 TB in the mines
Tanzania has a lot of mines, however; the magnitude of TB in these mines is not known. There is need to carry out a survey to establish the magnitude of the problem and act from a point of information.

7.4 Operational Research in TB
The program does not have a national research plan. There is no focal person to coordinate research activities in the program. The program should take lead in all TB research going on in the country. It should also initiate these researches and mobilize resources from government and partners for the research agenda.

7.5 Pharmacovigilance for SLD
It was also noted that there is no pharmacovigilance system in place for SLD.

7.6 Routine screening of Health Care Workers
Health care workers are not routinely screened for TB.

8.0 KEY LESSONS LEARNT
A number of key lessons were learnt from the TB program in the United Republic of Tanzania:-

8.1 Strong Political Commitment
There is strong political commitment given that the government commits resources for TB management. The government has a line budget for TB activities and the funds have been rising each year. The government is also supporting key positions in the program.

8.2 Centre of Excellence for MDR-TB Management
The Kibong’oto TB hospital is a centre of excellence for management of MDR-TB in the region. Most of the staff have been trained on management of MDR-TB and it is also a centre of training for the country. Patients are admitted in an ideal environment with adequate natural ventilation.

8.3 Capacity Building
The NTLP through has managed to train a relatively large pool of health care workers right from the periphery to the central level in management of TB and MDR-TB through both local and international courses.

8.4 PPM
The program has managed to actively engage the private sector in management of TB. The program has a budget line for private sector and has managed to strengthen the private sector in managing Tuberculosis.
Annex 1: ECSA HMC TB Resolutions 1999-2010

1. ECSA/HMC34/R 2: Resource Mobilization for Strengthening Health Systems
Prepare plans and budgets to enable member states to access the Global Health Fund and other sources of funds for HIV/AIDS, Malaria, TB, and other priority health problems.

2. ECSA/HMC38/R 1: Scaling up health interventions
Develop/strengthen plans for scaling up health interventions including Anti Retroviral Therapy (ART), Malaria, TB prevention and control and reproductive health and child survival;

3. ECSA/HMC 40/R2:
Promote the integration of reproductive health and child health programmes with HIV/AIDS, malaria and TB programmes as appropriate for synergy.

4. ECSA/HMC 40/R4
a) Review existing national HIV/AIDS/TB policies, programmes and strategies and accelerate provision of ARVs, VCT, PMTCT services
b) Promote and support TB and HIV/AIDS programme collaboration

5. RHMC/42/R2.6
1. Fully endorse the 2005 WHO Regional Committee for Africa resolution by declaring TB a national emergency.
2. Rapidly scale up DOTS expansion best practices, especially public-private partnerships and community involvement in the delivery of TB control services
3. Scale up TB/HIV collaborative activities including HIV testing and ART to dually infected TB patients in the context of universal access.

6. ECSA/HMC44/R3
1. Review current supply chain management for commodities used in the management of HIV/AIDS and TB patients in order to improve quality of care within 12 months.
2. Explore and document research on MDR and XDR TB treatment and disseminate findings to all member states by July 2008.

7. ECSA/HMC48/R7
1. Develop action plan on ACSM, integrate into national plans for TB, HIV and Malaria and mobilize adequate resources to support implementation of ACSM activities.
2. Establish and strengthen laboratory services for monitoring MDR and XDR TB and conduct assessment studies to evaluate the magnitude of MDR and XDR TB
3. Ensure that management of drug resistant TB is mainstreamed into national TB control plans.

8. ECSA/HMC50/R6
1. Maximize available opportunities from Global Fund and other partners to obtain additional resources for scaling up interventions to achieve MDGs.
2. Develop a proposal for mobilizing resources for an integrated regional HIV/AIDS, TB and Malaria Programme

9. ECSA/HMC50/R10
1. Establish X/MDR Task Force to ensure implementation and monitoring of the Global framework and report on the number of X/MDR cases notified and treated
2. Develop and expand capacity for diagnosis of drug resistant TB, strengthen quality DOTS and allocate adequate resources for management of X/MDR-TB.
10. **ECSA/HMCS2/R8**
1. Ensure adequate supply of quality assured second line anti-TB drugs to all DR-TB patients, backed by strengthened Pharmacovigilance and surveillance systems; and
2. Number of TB adverse events reported through TB Pharmacovigilance/ surveillance system
3. Prioritize the implementation of infection control measures in health care settings
### Annex 2: Program

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<th>Day</th>
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<th>Time</th>
<th>Activity</th>
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<tr>
<td>Day 1</td>
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<td>9.00 a.m</td>
<td>Visit Kibong’oto Hospital</td>
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<td>Day 2</td>
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<td>Morning</td>
<td>Meet with the Programme manager &amp; staff</td>
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<td>• Presentation on ECSA-HC and the HIV/AIDS, TB &amp; ID Program</td>
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<td>• Objectives and Expected Outcomes</td>
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<td>• Presentation on Overview of MDR-TB in Tanzania</td>
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<td>Afternoon</td>
<td>• Visit to the National HIV/AIDS Coordinator</td>
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<td>• Visit to the Tanzania Food and Drugs (TFDA)</td>
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<td>Morning</td>
<td>• Visit to the National TB Reference Laboratory</td>
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<td>• Visit to PATH</td>
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<td>Day 4</td>
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<td>Morning</td>
<td>• Visit Ilala Municipal Council (Amana Hospital)</td>
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<td>• Visit Temeke Health Centre</td>
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<td>Day 5</td>
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<td>Morning</td>
<td>Debriefing NTP and the MOH Officials</td>
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*Coordinators of the Mission: Dr. Lymo, Dr. Kisonga and Dr. Mboneko, TB Focal Persons in the NTLP*
**Annex 3: List of Key people met and interviewed**

<table>
<thead>
<tr>
<th>NAME</th>
<th>DESIGNATION/ORGANISATION</th>
<th>TELEPHONE</th>
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<tr>
<td>Dr. L. Mleoh</td>
<td>Director – Kiboweso</td>
<td>0767768298</td>
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<tr>
<td>Dr. Emmanuel Mutakayaleu</td>
<td>Drug Registration Officer</td>
<td>0769605127</td>
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<tr>
<td>Dr. Vedastus Kamale</td>
<td>Ag. Program Manager</td>
<td>0784350976</td>
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<tr>
<td>Dr. Zahra Mkomwa</td>
<td>Director TB/HIV project</td>
<td>0689371137</td>
<td><a href="mailto:zmkomwa@path.org">zmkomwa@path.org</a></td>
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<tr>
<td>Yusuf Bunu</td>
<td>TB Liaison Officer/Technical Officer</td>
<td>0784788064</td>
<td><a href="mailto:ybunu@path.org">ybunu@path.org</a></td>
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<tr>
<td>Theresia Ballehe</td>
<td>TB Dot Nurse</td>
<td>0789652155</td>
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<tr>
<td>Ayubu Alan</td>
<td>MDR Patient</td>
<td>0718691762</td>
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<tr>
<td>Dr. Neema Kapalata</td>
<td>RTCC – Temeke</td>
<td>0784691538</td>
<td><a href="mailto:kepalatan_neema@yahoo.com">kepalatan_neema@yahoo.com</a></td>
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<tr>
<td>Mariam Mindu</td>
<td>DTLC – WAILES I</td>
<td>0784640318</td>
<td><a href="mailto:maryammundu@yahoo.com">maryammundu@yahoo.com</a></td>
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<tr>
<td>Jonathan Mbwambo</td>
<td>PCOI TB/HIV</td>
<td>0754694519</td>
<td><a href="mailto:Jonathan.mbwambo@yahoo.com">Jonathan.mbwambo@yahoo.com</a></td>
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<tr>
<td>Silverstar Ngowi</td>
<td>DTLC – WAILES II</td>
<td>0713796911</td>
<td><a href="mailto:ngowi5@hotmail.com">ngowi5@hotmail.com</a></td>
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<tr>
<td>Lena Mbepera</td>
<td>POT Nurse</td>
<td>0753000902</td>
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<tr>
<td>Sostnes Kayuni</td>
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<td>Philemon Abneri</td>
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<td>Anna Mmbando</td>
<td>Health Secretary</td>
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<td><a href="mailto:mmbandoa@yahoo.com">mmbandoa@yahoo.com</a></td>
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<tr>
<td>Godfrid L. Mrema</td>
<td>Lab Technician</td>
<td>0754488657</td>
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<td>Pharm/KNDTH</td>
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<tr>
<td>Rose Shawa</td>
<td>Health Secretary</td>
<td>0752138050</td>
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<td><a href="mailto:shawarose57@yahoo.com">shawarose57@yahoo.com</a></td>
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<tr>
<td>Dr. Verus Kataru Mtoneke</td>
<td>Specialist Physician MTLP</td>
<td>0658696979</td>
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<td><a href="mailto:katarugamboneka@yahoo.com">katarugamboneka@yahoo.com</a></td>
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<tr>
<td>Bernada Emmanuel</td>
<td>Health Secretary – KNTH</td>
<td>0758295261</td>
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<td><a href="mailto:bmsase@yahoo.com">bmsase@yahoo.com</a></td>
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<tr>
<td>Crispin Mamkinga</td>
<td>Pharmacist</td>
<td>0784989878</td>
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<td><a href="mailto:cris2mus@yahoo.com">cris2mus@yahoo.com</a></td>
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<tr>
<td>Johnson Lyimo</td>
<td>PO NTLP</td>
<td>0784783636</td>
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<td><a href="mailto:johntete@gmail.com">johntete@gmail.com</a></td>
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<tr>
<td>Basra Doulla</td>
<td>Head of CTRL</td>
<td>0773230778</td>
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<td><a href="mailto:bedoulla@yahoo.com">bedoulla@yahoo.com</a></td>
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<tr>
<td>Richard Kinyaha</td>
<td>HeadKIDH Lab</td>
<td>0755639769</td>
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<td><a href="mailto:lkinyaharichard@yahoo.com">lkinyaharichard@yahoo.com</a></td>
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<tr>
<td>Dr. Allan Tarimo</td>
<td>PO – NTLP</td>
<td>0767666000</td>
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<tr>
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<td>MO – Kibong’oto</td>
<td>0755659206</td>
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