

# Tuberculosis Detection, Care, and Treatment for People Living with HIV in Rwanda

A rapid situation analysis in three districts



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**March 2011**



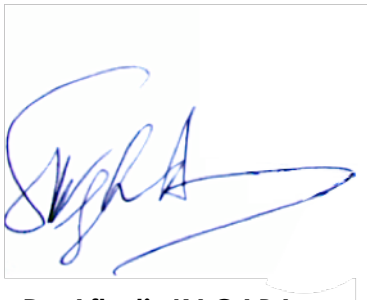
# RWANDA



## Acknowledgements

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In addition, we would like to acknowledge the One UN Family, particularly the United Nations Joint HIV/AIDS Programme (UNAIDS) and the World Health Organization (WHO), for providing financial and technical support to develop this report. The report will go a long way in identifying existing gaps and challenges to scaling-up TB case detection among people living with HIV in Rwanda. It is our hope that greater awareness of the need for TB screening, prevention, and treatment for HIV-positive people will greatly contribute to a reduction in the number of PLHIV dying of Tuberculosis.



**Dr. Aflodis KAGABA**  
Executive Director  
Health Development Initiative-Rwanda

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## List of Acronyms

<b>AIDS</b>	Acquired Immune Deficiency Syndrome
<b>ART</b>	Anti-retroviral therapy
<b>ARV</b>	Anti-retroviral
<b>AVVAIS</b>	Association of Vulnerable Widows Affected and Infected by HIV/AIDS
<b>BCC</b>	Behavior Change Communication
<b>CDT</b>	Centre de Dépistage et de Traitement
<b>CHW</b>	Community Health Worker
<b>CNLS</b>	National AIDS Control Commission
<b>CPT</b>	Cotrimoxazole Preventive Therapy
<b>CSO</b>	Civil Society Organization
<b>CTX</b>	Cotrimoxazole
<b>DHO</b>	District Health Officer
<b>EGPAF</b>	Elizabeth Glaser Pediatric AIDS Foundation
<b>FHI</b>	Family Health International
<b>FXB</b>	Francois Xavier Bagnoud International
<b>GF</b>	The Global Fund to Fight AIDS, Tuberculosis and Malaria
<b>GOR</b>	Government of Rwanda
<b>HDI</b>	Health Development Initiative-Rwanda
<b>HIV</b>	Human Immunodeficiency Virus
<b>ICAP</b>	International Center for AIDS Care and Treatment Programs
<b>IEC</b>	Information Education Communication
<b>INH</b>	Isoniazid
<b>MOH</b>	Ministry of Health
<b>NGO</b>	Non-Governmental Organization
<b>NISR</b>	National Institute of Statistics Rwanda
<b>NSP</b>	National Strategic Plan
<b>NTP</b>	National Tuberculosis Program
<b>OPD</b>	Out Patient Department
<b>PLHIV</b>	People Living with HIV/AIDS
<b>PNILT</b>	Integrated National Program to Fight against Leprosy and Tuberculosis
<b>RRP+</b>	Network of Associations of People Living With HIV/AIDS
<b>RSA</b>	Rapid Situation Analysis
<b>TB</b>	Tuberculosis
<b>TRAC+</b>	Center for Treatment and Research on HIV/AIDS, Malaria, Tuberculosis and Other epidemics
<b>TRACnet</b>	Information System for Monitoring HIV and AIDS medical components at TRAC
<b>UNAIDS</b>	United Nations Joint HIV/AIDS Programme
<b>WHO</b>	World Health Organization

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# 1. Executive Summary

## **Background:**

A rapid situation analysis (RSA) was undertaken to identify current gaps and challenges in the detection, care, and treatment of Tuberculosis amongst people living with HIV. The RSA was undertaken in three districts: Bugesera, Gasabo, and Muhanga. The findings were utilized to develop appropriate recommendations and strategies.

## **Methodology:**

The RSA consisted of a combination of quantitative and qualitative data collection methods. Key informant interviews were conducted with the management of health facilities; district data managers; health care providers; members of RRP+; and other stakeholders. Key informants selected for the RSA were based on convenience sampling, and thus are not representative and can only be limited to the three districts studies.

## **Key Findings and Recommendations:**

### **1. Ensure TB screening becomes routine for all patients in HIV care and treatment**

TB screening is not yet routine for HIV patients in all health facilities. The necessary human, financial, and diagnostic resources must be in place to support routine TB screening for PLHIV.

### **2. Improve the size and scope of TB/HIV trainings for health care providers**

There is a knowledge gap among health care providers and a lack of human resources to provide integrated TB/HIV care. More health care providers must be trained on TB/HIV co-infection, and the depth and quality of such trainings should be improved.

### **3. Increase the availability of TB diagnostic tools at health facilities**

Not all health facilities are equipped to diagnose TB on-site, and others face insufficient access to diagnostic tools. Where possible, effort should be made to equip health facilities to test for TB on-site or improve the geographic distribution of testing sites within each district.

### **4. Improve routine data collection of TB screening among ARV patients**

There is limited availability and/or accessibility of routine TB data for ARV patients at the district level. Data collection on TB screening for HIV patients must be routine, and information sharing improved at the national, district, and individual health facility level.

### **5. Increase awareness of TB screening, care, and treatment among PLHIV**

There is still a lack of awareness and understanding of TB among HIV-positive people. Associations/cooperatives of PLHIV in the three districts should be provided further training on TB and facilitated to inform their members on the importance of TB screening.

### **6. Address stigma and discrimination regarding TB and HIV**

Stigma and discrimination continue to face PLHIV in Rwanda. Community health workers should be trained to address stigma and discrimination by promoting awareness of TB and HIV in the community. Health care providers should also be trained to recognize and address stigma and discrimination.

### **7. Increase involvement of civil society in addressing TB/HIV co-infection**



The role of civil society organizations (CSOs) in TB/HIV apart from RRP+ appears limited. CSOs should be trained on TB and HIV and encouraged to raise community awareness on the importance of TB screening for PLHIV.

## 2. Introduction

Tuberculosis (TB) is the number one cause of death for people living with HIV around the world, accounting for 23% of all AIDS-related deaths in 2008.<sup>1</sup> In Rwanda, TB is the leading opportunistic infection (OI) affecting HIV-positive people, which in Rwanda accounts for approximately 3% of the adult population.<sup>2</sup> In 2009, Rwanda had an estimated 169,200 people living with HIV (PLHIV) and by June 2010, 83,041 people were receiving anti-retrovirals (ARVs).<sup>3,4</sup> The country also has a high TB burden, and the World Health Organization (WHO) estimates there are 13,000 co-infected people in Rwanda.<sup>5</sup>

Rwanda is committed to providing an integrated response to the TB/HIV dual epidemic. In 2005, the country established a joint office for TB and HIV and began integrating TB and HIV services in line with the WHO Stop TB strategy. In the same year, the Ministry of Health released a *Policy Statement on TB/HIV Collaborative Activities*, alongside the country's National TB program (PNILT) and the Treatment and Research AIDS Center (TRAC). The policy identified key strategies for combatting the dual epidemic of TB and HIV, including intensified TB case finding among PLHIV.

However, detection of TB among PLHIV continues to pose a significant barrier to care and treatment.<sup>6</sup> In recent years, systematic screening for HIV has been promoted for newly diagnosed TB patients (97.4% in 2009), while TB screening among PLHIV has remained low. In 2008, 1,558 HIV patients were diagnosed with TB and received treatment for TB and HIV. This data suggests that only about 9% of the estimated 13,000 HIV-positive incident TB cases received treatment for TB and HIV (UNGASS 2010). The National TB Program has recognized the need to improve TB case detection in order to reduce the number of HIV-positive people dying from TB.

In 2009, the *National Strategic Plan on HIV and AIDS 2009-2012*, the country's guiding document in the HIV response, highlighted the importance of TB detection, care, and treatment for PLHIV. Outcome 2.1.1.3 of the NSP aims for 80% of PLHIV to be screened for TB in HIV care or treatment settings by 2012. In August and September 2009 an evaluation was conducted to assess the integration of TB screening activities in 219 HIV care settings. In total, 90% of 14,440 newly enrolled HIV patients were screened for TB, with 11% screening positive. In the same year, data provided from ARV registers indicated that only 75% of 81,084 HIV patients enrolled in HIV care for more than six months had been screened for TB, with 3% screening positive (MOH 2010).

Rwanda aims for TB screening to be routine for newly enrolled HIV patients and patients already enrolled in HIV care. In order to develop more effective strategies for TB case detection, care, and treatment among PLHIV, it is important to identify the existing gaps and challenges to TB screening. Health Development Initiative has undertaken this rapid situation analysis on TB screening, care, and treatment among PLHIV in three districts of Rwanda as part of a project with the United Nations Joint Programme on HIV/AIDS (UNAIDS). The findings illuminate some of the existing barriers to scaling-up TB case detection, care, and treatment for PLHIV in the three districts, and provide insight into problems facing PLHIV in other districts.

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<sup>1</sup> World Health Organization. <http://www.who.int/hiv/topics/tb/en/index.html>.

<sup>2</sup> Rwanda Demographic and Health Survey 2005. Government of Rwanda, 2005.

<sup>3</sup> EPP/Spectrum estimates 2010

<sup>4</sup> Ministry of Health Annual Report 2009-2010. Government of Rwanda, 2010. (MOH)

<sup>5</sup> UN General Assembly Special Session on HIV/AIDS Country Progress Report 2010. (UNGASS)

<sup>6</sup> Tuberculosis in Rwanda: challenges to reaching the targets. *Bulletin of the World Health Organization* 85(5). M. Gasana, 2007.

# 3. Methodology

## **Objectives of the RSA**

The rapid situation analysis (RSA) was undertaken with the overall goal of identifying current gaps and challenges in the detection, care, and treatment of Tuberculosis amongst people living with HIV in three districts. In order to meet this goal, several specific objectives were identified. These objectives were to ascertain:

- The current level of TB screening and co-infection among PLHIV in each district
- The degree to which TB/HIV care is integrated at district hospitals
- The availability and accessibility of TB testing in each district
- Training of health care providers on management of TB/HIV co-infection
- The role of stigma and discrimination for PLHIV accessing TB services
- Partners working in TB and/or HIV in each district

## **Design and Sampling**

The RSA consisted of a combination of quantitative and qualitative data collection methods, in addition to desk review of existing policies and reports regarding TB/HIV in Rwanda. Key informant interviews and focus group discussions were completed using structured questionnaires and unstructured interview guides. Unique questionnaires were developed for four different interview groups: directors and health facility officials; district data managers; health care providers working in TB and/org HIV care; and people living with HIV. A desk review of relevant literature and national policies was also conducted in order to guide the data collection process and provide background for the RSA.

The RSA is not intended to be representative, but to provide a snapshot of the current gaps and challenges regarding TB screening and care amongst PLHIV in three districts with high numbers of PLHIV. Key informants selected for the RSA were based on convenience sampling, and are not representative. The RSA relied upon the experiences and access to data of interviewees to highlight key gaps and needs, from which to develop recommendations and strategies.

## **Research Locations**

The RSA was conducted in three districts: Bugesera (Eastern Province); Gasabo (Kigali City); and Muhanga (Southern Province). The districts represent one urban environment, Gasabo (Kigali City), and two rural, Bugesera and Muhanga. The health system in Bugesera district is comprised of 14 health facilities serving an estimated population of over 330,000 people. In Gasabo district, an estimated 355,000 people are served by 20 facilities. There are 15 health facilities in Muhanga district serving an estimated 327,000 people. Table 1 provides a brief overview of the health infrastructure in the three districts.

**Table 1: Overview of the Health Sector by District (Source: Rwanda Interactive Health Facility DB)<sup>7</sup>**

District	Province	Population Served	Hospitals	Health centers	*Other	All Health Facilities
Bugesera	Eastern	333,693	1	12	1	<b>14</b>
Gasabo	Kigali City	355,172	3	14	3	<b>20</b>
Muhanga	Southern	327,381	1	12	2	<b>15</b>

- includes clinics, dispensaries, and prison clinics

## Data Collection

A combination of questionnaires and interview guides were designed and used for the purposes of the RSA. These include separate questionnaires for structured interviews with District Hospital management, district data managers, and health care providers working in TB and/or HIV. In addition, interview guides were used to conduct unstructured key informant interviews and focus group discussions with other relevant stakeholders.

Key informant interviews and/or focus group discussions were conducted with the following groups (total number of persons interviewed in parentheses):

- Health care providers involved in TB and/or HIV services (12)
- District Hospital Directors and/or management staff (4)
- District Health Data Managers (*service statistique*) (3)
- Representatives of RRP+ and other NGOs (15)
- National and district health officials (14)
- People living with HIV (75)

## Limitations

Interviewees selected for the RSA were based on convenience sampling, and are not representational. The assessment was not intended as a national survey, but a rapid situation analysis in order to gain essential information from which to develop training and outreach activities of relevance to the three districts. Additionally, as HIV status is confidential, a random sampling of PLHIV to participate in the RSA would have not been ethical or feasible. Instead, the study relied on interviews with representatives of RRP+, an organization representing associations of PLHIV. As such, the study leaves out the views of individuals who may not be open about their HIV status. This limits the ability of the study to accurately gauge the role stigma and discrimination may play in reducing access to and desire to seek care.

In addition, the RSA combines a mix of self-administered and interviewer-administered questionnaires. Due to time and accessibility constraints, the researchers were not always present to deliver the questionnaires. As a result, self-administered questionnaires were done to save data collection time. The data analysis reveals that there may be some slight inconsistencies in the data findings due to this fact.

<sup>7</sup> Rwanda Interactive Health Facility Database, Ministry of Health. Accessible at: <http://www.pbfwanda.org.rw/pbfbdd/freelist.php>.

## 4. Findings & Analysis

This chapter provides analysis and findings from the data obtained during the RSA. The information presented here elucidates several existing gaps and challenges to improving TB case detection and treatment for people living with HIV in Bugesera, Gasabo, and Muhanga districts. These gaps and challenges will be discussed in more detail in chapter four, followed by a presentation of recommendations and next steps in chapter five.

### **Patients Receiving Anti-retrovirals**

Most recent data on the number of HIV-positive people receiving anti-retrovirals (ARVs) in each district was obtained from TRAC+. In December 2010, the three districts were providing ARVs to a combined total of 12,399 patients. Bugesera district had a total of 1,873 patients receiving ARV treatment. This included 1,726 adults and 147 children, of which women comprised 63%. In the same month, Gasabo district had 7,332 patients on ARVs, 6,850 adults and 482 children. Women comprised 64% of all ARV patients in the district. In Muhanga, 3,194 patients were receiving ARVs, 2,962 adult patients and 232 children. In total, 60% of all patients on ARV treatment in Muhanga were women.

**Table 2: ARV Patients by District - December 2010 (TRAC+)**

District	Adults	Children	Total	Women
Bugesera	1,726	147	<b>1,873</b>	63%
Gasabo	6,850	482	<b>7,332</b>	64%
Muhanga	2,962	232	<b>3,194</b>	60%

### **TB Screening for PLHIV**

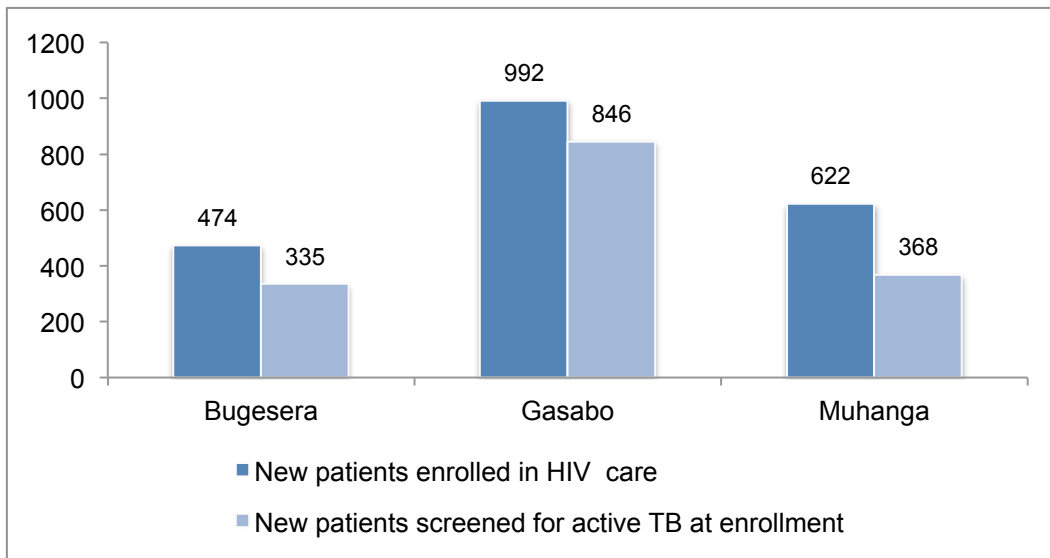
Data from key informant interviews and questionnaires indicates that TB screening amongst PLHIV is not yet routine in all health facilities in the three districts. Only one of the three district hospitals – Kabgayi Hospital in Muhanga District – reported that HIV patients are routinely referred for TB testing. At Nyamata Hospital in Bugesera District, HIV patients are referred for TB testing when symptomatic or when there is a history of contact with a TB patient. HIV patients at Kibagabaga Hospital in Gasabo district were also referred for TB testing based on presentation of TB symptoms.

Routine data from health facilities submitted to TRAC+ indicates the level of TB screening for newly enrolled patients in HIV care and treatment services (pre-ART patients). Data collection captures: the number of newly enrolled HIV patients screened for TB at enrollment; the number of patients screened positive for TB; and the number of newly enrolled patients who started TB treatment in the month of enrollment. The number of patients screening positive may differ significantly from the number placed on treatment because screening is based solely on clinical assessment and not TB testing. The number of patients in need of TB treatment may therefore be lower than those initially screening positive based on symptomology.

Data for the three districts was obtained via TRACnet for the period of September 2010 to January 2011.<sup>8</sup> During this period, 474 new HIV patients were enrolled in Bugesera district, 64% of which were women. Data from Bugesera indicates that 71% of pre-ART patients (335/474) were screened for active TB, 13% of which were TB positive (43/335). A total of six patients (14% of those testing positive) were placed on TB treatment. The number of patients placed on TB treatment appears quite low and may indicate a gap in TB care and treatment for pre-ART patients. However, it is also unknown what percentage of those who screened positive based on clinical assessment later tested positive for TB via chest X-Ray or sputum. The difference may explain the low number of patients on TB treatment.

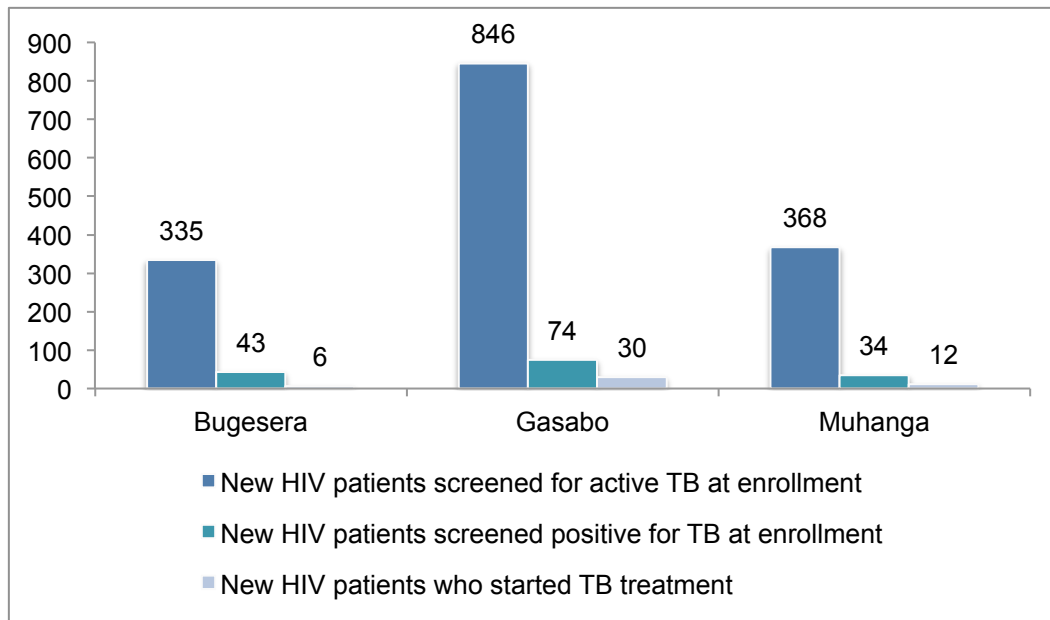
In comparison, 992 new patients were enrolled in HIV care in Gasabo district, 58% of which were women. Of those newly enrolled, 85% (846/992) were screened for active TB at enrollment. Of those screened, 9% screened positive for TB (74/846), 41% of which were placed on TB treatment (30/74). During the same period, Muhanga district enrolled 622 new patients, 67% of which were women. Only 59% (368/622) of pre-ART patients were screened for active TB in Muhanga district, 9% of which screened positive for TB (34/368). Of those testing positive, 35% were placed on TB treatment (12/34). Figure 2 illustrates the number of pre-ART patients screened for TB in each district between September and January, and Figure 3 shows the number testing positive and receiving treatment.

**Figure 1: TB Screening among newly enrolled HIV patients Sept 2010 – Jan 2011**



<sup>8</sup>The period of September through January was selected as the indicator for pre-ART TB screening was only integrated into TRACnet in August 2010 and data collected in the first month was inconsistent.

**Figure 2: TB infection and treatment among newly enrolled HIV patients Sept 2010 – Jan 2011**



Unfortunately, district-wide data on TB screening among ARV patients in 2010 was not readily available from data managers at the district level. This may reflect recent changes in routine indicators collected by TRACnet. However, TB screening for PLHIV is meant to be done at enrollment in HIV care and treatment and at each follow-up visit for those on treatment more than six months. This data is supposed to be routinely collected every 6 months at the national level (MOH 2010).

However, the data provided for TB screening among newly enrolled HIV patients suggests that TB screening among HIV patients is still significantly less extensive than HIV testing among TB patients. In 2010, 100% of patients with new pulmonary TB (NTPM+) were screened for HIV in Bugesera and Muhanga districts, and 97% were screened in Gasabo district. This indicates that HIV testing for TB patients is currently routine in all three districts, while TB screening for HIV patients is not currently so.

### **TB/HIV Integration at District Hospitals**

Each district is served by a district hospital, which supervises and coordinates health service provision for the entire district. The level and quality of care provided at these institutions is an important indicator for the overall functioning of the health system in each district. During the RSA, data was sought on the level of TB and HIV service integration in each of the district hospitals serving Bugesera, Gasabo, and Muhanga districts. These are Nyamata Hospital, Kibagabaga Hospital, and Kabgayi Hospitals, respectively.

All three hospitals currently provide integrated, or one-stop, TB and HIV care and have staff trained in managing TB/HIV co-infection. Nyamata and Kibagabaga Hospitals currently provide VCT, ARV, PMTCT, and TB services. Whereas, Kabgayi Hospital provides ARV, PMTCT, and TB services. All three hospitals are equipped to test for TB on-site using Chest X-Ray and/or sputum microscopy. Nyamata and Kabgayi Hospitals indicated a length of 1-3 days to receive TB test results, while Kibagabaga Hospital indicated 4-7 days. The longer waiting time at Kibagabaga is probably a reflection of its

significantly larger patient caseload. The hospital further indicated 'insufficient access to diagnostic tools' as a significant barrier to improving TB screening for PLHIV.

All three hospitals reported that ART staff administer the five-question TB symptom checklist developed by PNILT and TRAC+ to HIV patients. In addition, all three also indicated that ART staff accompany HIV patients to the TB clinic, although Nyamata Hospital noted that sometimes this is not possible due to insufficiency of staff. In all three hospitals, a doctor informs HIV patients of their TB test results. Both Nyamata and Kabgayi Hospitals reported that home visits are conducted to trace TB contact and screen family members. Kibagabaga Hospital noted that this was not currently possible due to lack of facilitation and personnel.

### **Availability of TB Testing**

The availability and geographic accessibility of TB testing is important to ensure adequate and timely TB case detection amongst PLHIV. While identification of symptoms can indicate the likelihood of TB infection, access to diagnostic tools is important to confirm suspicion of TB. Unfortunately, not all health facilities in Rwanda are currently equipped to provide on-site TB testing, either Chest X-Ray or sputum microscopy. However, TB testing is free of charge to HIV patients in all districts. Many health centers serving smaller populations in rural areas rely on larger health centers and district hospitals to refer patients for TB testing.

Data on the availability and location of TB test sites (CDT) was collected for each district. In Bugesera district, six of the 14 facilities currently reporting to TRAC are equipped to test for TB on-site (43%). These include Nyamata District Hospital, four health centers, and the clinic at Rilima Prison. Only one-third (33% or 4/12) of health centers in the district are equipped to perform chest X-Rays or sputum microscopy to test for TB. The complete list of TB test sites in all three districts can be found in Annex I. Table 3 provides an overview of TB test sites per district.

In Gasabo district, ten out of 20 facilities (50%) are able to test for TB on-site. These include: Kibagabaga District Hospital; King Faisal Hospital (referral hospital); six health centers; one private clinic; and Kimironko Prison clinic. In total, 43% of health centers (6/14) are equipped to test for TB on-site. In Muhanga district, eight out of 15 facilities (53%) are equipped to test for TB on-site. TB test sites include Kabgayi District Hospital, five health centers, one dispensary, and Gitarama Prison clinic. In total, five out of 12 health centers (42%) are able to test for TB.

**Table 3: Health facilities equipped to test for TB by district**

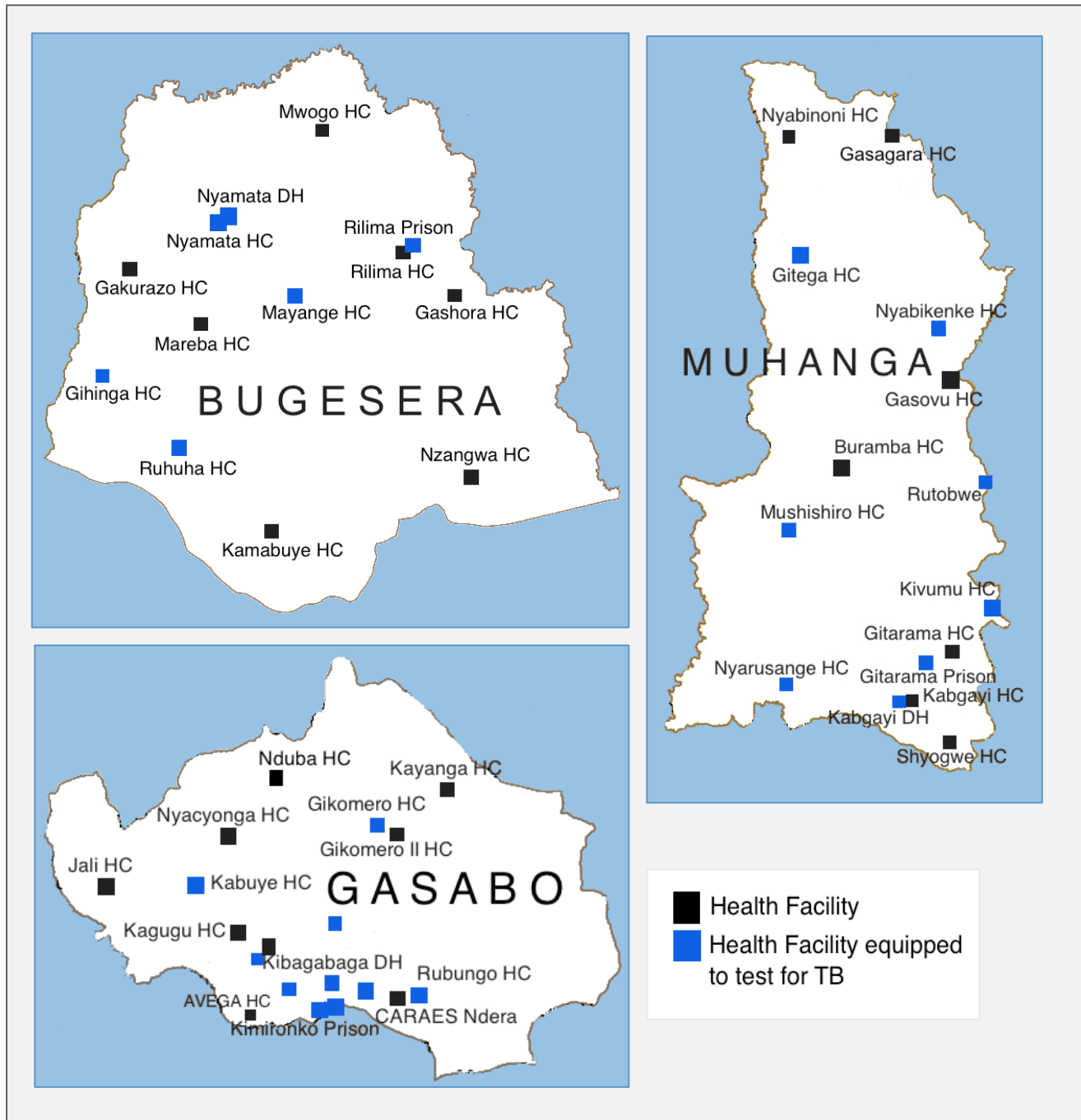
<b>District</b>	<b>No. Health Facilities</b>	<b>No. TB Test Sites</b>	<b>Percentage</b>
Bugesera	14	6	43%
Gasabo	20	10	50%
Muhanga	15	8	43%

On the following page, Figure 4 illustrates the geographic distribution of health facilities equipped to test for TB in each district. By mapping the distribution of health facilities equipped to test for TB, it is clear that access to TB testing is not evenly distributed throughout each district. This may present a significant barrier to proper diagnosis of TB among HIV-positive people, particularly in rural areas with reduced availability of transportation (e.g. southern parts of Bugesera district). In addition, not



all health facilities equipped to diagnose TB also provide ARVs (e.g. Nyamata Health Center in Bugesera). This presents challenges to rapid diagnosis and provision of integrated TB/HIV care.

**Figure 3: Geographic distribution of TB test sites by district**



## Human Resources & Training

Training health care providers on managing TB/HIV co-infection is an essential aspect of ensuring quality, integrated TB and HIV care. Staff working in both TB and HIV care and treatment must be educated on care for co-infected individuals and be facilitated to coordinate services at their respective health facilities. Through questionnaires and key informant interviews, the RSA sought to establish the level of TB/HIV training undertaken and the organizations providing training to staff working in TB and HIV in each district.

The district hospital in all three districts reported staff trained on management of TB/HIV co-infection. In Bugesera, Nyamata District Hospital reported between 1-5 TB staff members trained on TB/HIV co-infection by TRAC+. However, the hospital reported that none of its ARV staff had been trained. In Gasabo district, Kibagabaga Hospital reported between 6-10 TB staff trained on TB/HIV co-infection by the National TB Program, and between 1-5 ART staff trained by TRAC+. These figures are highlighted in Table 4 below.

Kabgayi Hospital in Muhanga reported more than ten TB staff trained on TB/HIV co-infection by the National TB Program, and between 6-10 ART staff trained by the National TB Program and/or FHI. In addition, all three district hospitals reported staff trained on TB infection control measures. Although the size of the TB and ART staff working in health centers is considerably smaller, the majority of health centers reported between 1-5 TB or ART staff (depending on the type of services provided at each facility) trained in TB/HIV co-infection by either TRAC+ or the National TB Program. Health centers also reported staff trained on TB infection control.

**Table 4: Number of staff trained on TB/HIV co-infection by district hospital**

District	Health Facility	ART staff	TB staff
Bugesera	Nyamata DH	0	1-5
Gasabo	Kibagabaga DH	1-5	6-10
Muhanga	Kabgayi DH	6-10	10+

Despite previous training of TB and ART staff, all three district hospitals reported 'insufficient TB/HIV training' and 'insufficient human resources' as the most significant barriers to improving TB case detection amongst PLHIV in their respective districts. In addition, nurses repeatedly mentioned the need for further training on TB/HIV co-infection during key informant interviews at hospitals and health centers. For example, nurses working in TB units stated the need for more information on ARVs in order to better advise and treat co-infected patients.

In addition, health care providers and directors of health facilities commonly reported a lack of adequate human resources as a barrier to providing integrated TB/HIV care and improving detection of TB amongst PLHIV. For example, a nurse working in a one-stop TB/HIV center reported that there is often only one staff member providing these services, and colleagues cannot provide support, as they have not been trained on one-stop treatment.

## **Access to TB/HIV Tools and Resources**

The capacity to provide integrated TB and HIV care to PLHIV rests upon the ability of health care providers to access the necessary resources to diagnose, treat, and control TB infection. These include access to TB treatment and prophylaxis, handbooks on TB/HIV management, and infection control measures including facial masks. All health facilities visited during the RSA reported access to either Isoniazid (INH) or Cotrimoxazole (CTX) preventive therapy for treatment of TB in HIV-positive patients.

Drug stock-outs were relatively uncommon. Both Kabgayi and Nyamata district hospitals reported a consistent supply of either INH or CTX. Where drug stock-outs were reported (e.g. Nyamata District Hospital, Nyamata Health Center) they were not more than once per year. However, during key informant interviews, health care providers commonly noted a lack of access to facial masks for TB infection control. This was noted as a significant barrier to patient care as nurses and doctors were reluctant to have contact with patients known to have TB.

All hospitals and health centers visited were equipped with at least one copy of the TB/HIV Integration Manual or Handbook produced by the Ministry of Health/TRAC+. In addition, all health facilities reported access to the five-question TB screening questionnaire for PLHIV developed by TRAC+ and the National TB Program. However, interviews with health care providers working in TB units suggested there is need for greater information on ARVs to be incorporated into the manuals.

## **Stigma and Discrimination against PLHIV**

Stigma and discrimination facing PLHIV are significant barriers to appropriate diagnosis and treatment of TB/HIV co-infection. Stigma associated with HIV can significantly impact both access to and desire to seek care, leading to delayed care seeking and rejection of care. In addition, TB carries its own stigma, that can affect individual decisions to seek care and treatment. TB is a disease often associated with poverty and poor hygiene, and is often considered an indicator of HIV infection. Thus, PLHIV may face dual stigma regarding TB/HIV co-infection, which may negatively impact their decisions to seek care.

A recent study initiated by AVVAIS, in collaboration with UNAIDS, CNLS, and RRP+, assessed the level of perceived stigma and discrimination among HIV-positive people living in Rwanda. The 2009 *People Living with HIV Stigma Index* found that 74% of people living with HIV who felt they had experienced discrimination from other people believed their HIV status was the reason.<sup>9</sup> Although 87% of respondents reported never being denied access to health services, it is likely that fear of being labeled as HIV-positive has led some to delay care seeking. Only 69% of respondents reported receiving treatment for opportunistic infections (including TB). While stigma and discrimination were not expressly identified as barriers to screening in our interviews with RRP+, it is reasonable to assume that some level of stigma attached TB and HIV acts upon individual decisions regarding care seeking. This is particularly the case when patients fear disclosure of their HIV status due to lack of confidentiality.

The district hospital in each of the three districts reported health care providers trained on stigma and discrimination against PLHIV. Kibagaba Hospital in Gasabo District reported more than ten staff members trained. Separate trainings were provided by TRAC+ and Intrahealth. In Bugesera District, Nyamata Hospital reported between one and five staff members trained on stigma and discrimination. Training was provided by the Ministry of Health, TRAC+, EGPAF, and the Global Fund.

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<sup>9</sup>UNAIDS. (2009) *People living with HIV Stigma Index: Rwandan Stigma and Discrimination Survey Report*. United Nations Joint HIV/AIDS Programme. Kigali, Rwanda.

In Muhanga, Kabgayi Hospital reported between six and ten health care providers trained by TRAC+ and FHI.

Key informant interviews revealed further training on stigma and discrimination conducted by TRAC+ at the health center level. However, the often-high turnover rate of staff implies that training on stigma and discrimination may need to be repeated at regular intervals. In addition, only two of the three district hospitals – Nyamata and Kabgayi – reported having written guidelines or a manual to educate health care providers on stigma and discrimination, and written guidelines on patient confidentiality. Health centers were far less likely to report having written guidelines on either stigma or confidentiality for persons with HIV.

### **Partners involved in TB/HIV services**

A number of national and international organizations are currently working to support integrated TB and HIV services. These partners are implementing a range of activities including training of health care providers, awareness raising, and support for direct service provision. Through key informant interviews with district health officials and health facility staff, organizations working in the area of TB and HIV in each district were identified. The list is not exhaustive, but captures the most visible organizations working in this field in each district, as reported by local health authorities.

All three districts reported training and support from TRAC+, which now comprises the National TB Program (formerly PNILT). TRAC+ has provided training for health care providers on management of TB/HIV co-infection, as well as stigma and discrimination against PLHIV. Such trainings were reported by all three district hospitals as well as many of the health centers working in each district.

In addition, all three districts identified a number of international NGOs implementing TB and/or HIV activities. In Bugesera district, World Vision, the Global Fund, and the Elizabeth Glaser Pediatric AIDS Fund (EGPAF) were identified as partners working in TB and/or HIV. World Vision was further noted as an organization working in Gasabo district, which also identified ICAP and Intrahealth as partners. Several organizations were identified in Muhanga district, including Family Health International (FHI), FXB, and CARITAS.

### **Outreach to PLHIV**

Outreach and education to PLHIV is an important aspect of increasing knowledge and diagnosis of TB amongst PLHIV. RRP+, the Network of Associations of People Living with HIV/AIDS, is an important actor in providing peer education to HIV-positive peoples in Rwanda. RRP+ is an umbrella organization with 45 member associations in Bugesera district, 53 in Gasabo, and 37 in Muhanga. The organization represents a combined total of approximately 7500 PLHIV in the three districts.

RRP+ has currently implemented training of trainers on TB and HIV for member associations in 22 districts, with ICAP training in the remaining eight. Representatives interviewed report that RRP+ has conducted training for member associations in all three districts. However, the trainings were introductory and it has been suggested that additional, in-depth training on TB/HIV co-infection would be beneficial to members. It was also noted that lack of awareness of TB among PLHIV continues to be a problem. In addition, not all associations of PLHIV are members of RRP+, and thus may not have benefited from such trainings.

The district hospital in all three districts reported having a working relationship with RRP+. Continued strengthening of the links between the health sector and RRP+ in each district will ensure coordinated efforts to provide education and support increased TB screening amongst PLHIV.

Interviews conducted with district hospital officials also revealed specific outreach activities targeting HIV-positive people.

In Bugesera, some awareness on TB among the community and PLHIV has been conducted via mobile VCT and mobile TB programs. In Muhanga district, Kabgayi Hospital reports that they routinely inform HIV patients on the importance of TB screening and conducts home visits to educate families. In Gasabo district, it was reported that PLHIV are systematically screened in outpatient departments (OPDs). However, the level of outreach to PLHIV still remains low and there are significant steps to take towards ensuring the PLHIV are informed about the need and availability for TB screening, care, and treatment.

# 5. Recommendations

The findings from the RSA illuminate a number of key gaps and challenges to improving TB case detection, care, and treatment among HIV patients in Bugesera, Gasabo, and Muhanga districts. These findings may likely reflect the situation present in other districts as well. The greatest challenge is that TB screening is not yet routine for patients in HIV care and treatment at all health facilities. This is due to a number of factors, including limited human resources and training of health care providers, as well as awareness among PLHIV. This chapter outlines a number of key recommendations that reflect the findings of the RSA and the gaps and challenges identified therein.

**Based on the findings, the key recommendations are to:**

- ***Ensure TB screening becomes routine for all patients in HIV care and treatment***

The findings of the RSA clearly indicate that TB screening is not yet routine for patients in HIV care and treatment at all health facilities in these districts. Only 59-85% of patients newly enrolled in HIV care were screened for TB in 2010. This continues despite the Ministry of Health's mandate that TB screening should be done at enrollment in care and treatment for new patients and at each follow-up visit for those on treatment more than six months (MOH 2010). Relevant national and district health officials should ensure the necessary human, financial, and diagnostic resources are in place to support routine TB screening for PLHIV.

- ***Improve the size and scope of TB/HIV trainings for health care providers***

Key informants interviewed during the RSA agreed there is a knowledge gap on TB and HIV among health care providers, as well as a lack of human resources to provide integrated care. Health care providers working in one-stop TB/HIV care reported feeling overwhelmed due to a lack of adequate numbers of trained staff. More health care providers must be trained on managing TB/HIV co-infection in TB and HIV care settings. In addition, there is need for improving the depth and quality of such trainings. For example, TB staff expressed unfamiliarity with ARVs when treating co-infected patients. Training on TB/HIV must target both TB and HIV staff (ARV/PMTCT) and strive to provide in-depth understanding of drug regimens and dual treatment protocols.

- ***Increase the availability of TB diagnostic tools at health facilities***

Not all health facilities currently have access to either Chest X-Ray or sputum microscopy for the diagnosis of TB on-site. In addition, some health facilities equipped to diagnose TB on-site, but serving large populations, reported insufficient access to diagnostic tools as a key barrier (e.g. Kibagabaga Hospital). Where possible, effort should be made to equip health facilities to test for TB on-site or improve the geographic distribution of testing sites within each district. In addition, where TB testing must be done off-site, links between health facilities should be strengthened to ensure rapid diagnosis and notification of results.

- ***Improve routine data collection of TB screening among ARV patients***

The limited availability and/or accessibility of routine TB data for ARV patients was evident at the district and health facility level during the RSA. TB screening among newly enrolled HIV patients (pre-ART) was easily accessible through TRACnet, and HIV screening among TB patients was readily accessed at the district level. However, data on TB screening among patients enrolled in HIV care and treatment for more than six months was not available from those interviewed at district level or via TRACnet. Data collection on TB screening among HIV patients must be routine and greater emphasis placed on information sharing at the national, district, and health facility level.

- ***Increase awareness of TB screening, care, and treatment among PLHIV***

Members of RRP+ interviewed noted that despite past trainings for associations of PLHIV, there is still a lack of awareness of TB among HIV-positive people. Educating PLHIV on TB/HIV co-infection is extremely important to ensure that HIV patients seek TB screening, care, and treatment. Unfortunately, TB carries its own stigma that can be compounded for PLHIV. Educating PLHIV on the preventability and curability of TB, with early detection, will greatly improve the willingness of PLHIV to undergo TB screening. Associations/cooperatives of PLHIV in the three districts should be provided further training on TB and facilitated to inform their members on the importance of TB screening.

- ***Address stigma and discrimination regarding TB and HIV***

Stigma and discrimination continue to face PLHIV in Rwanda. In order to reduce stigma facing both TB and HIV patients, there is need to increase awareness of both diseases in the community. Community health workers (CHWs) can play an important role in reducing stigma by educating the community on the preventability and curability of TB for all people, including HIV-positive people. CHWs should be trained to promote awareness of TB and HIV among the community and PLHIV. They should also be facilitated to refer PLHIV to TB care and treatment services. In addition, all trainings of health care providers on TB and HIV should include components addressing stigma and discrimination.

- ***Increase involvement of civil society in addressing TB/HIV co-infection***

A number of international organizations working in TB and HIV were identified during the RSA, while the role of civil society organizations (CSOs) apart from RRP+ was unclear. This may be due to the relative size and visibility of INGOs compared to CSOs. However, effort should be made to engage CSOs working with PLHIV and health care providers in the areas of TB and/or HIV, through training on TB and HIV. CSOs have an important role to play in raising community awareness on the importance of TB screening for PLHIV. Training relevant CSOs should be prioritized to increase community awareness and involvement in improving TB case detection, care, and treatment for HIV-positive people.

# ANNEX: Health Facilities by District

The data provided in the tables below was obtained from the Ministry of Health *Rwanda Interactive Health Facility Database* available at: <http://www.pbfwanda.org.rw/pbfbdd/freelist.php>.

## Bugesera District

#	Health Facility	Type	Population	On-site TB test
1	Gakurazo	Health Center	16,370	
2	Gashora	Health Center	21,651	
3	Gihinga	Health Center	28,288	✓
4	Kamabuye	Health Center	29,091	
5	Mareba	Health Center	31,977	
6	Mayange	Health Center	22,584	✓
7	Mwogo	Health Center	17,340	
8	Ngeruka	Health Center	-	
9	Nyamata	Health Center	31,170	✓
10	Nyamata Hospital	District Hospital	333,693	✓
11	Nzangwa	Health Center	21,338	
12	Rilima Prison	Prison Clinic	9,076	✓
13	Rilima	Health Center	47,749	
14	Ruhuha	Health Center	28,771	✓

## Gasabo District

#	Health Facility	Type	Population	On-site TB test
1	AVEGA Kigali	Health Center	-	
2	CARAES Ndera	Other	-	
3	Gihogwe	Health Center	-	
4	Gikomero	Health Center	12,441	✓
5	Gikomero II	Health Center	-	
6	Jali	Health Center	39,332	
7	Kabuye (Gasabo)	Health Center	14,127	✓
8	Kacyiru	Health Center	59,615	✓
9	Kacyiru Police Hospital	Hospital	-	



10	Kagugu	Health Center	29,261	
11	Kayanga	Health Center	20,796	
12	Kibagabaga Hospital	District Hospital	355,172	✓
13	Kimironko	Health Center	64,865	✓
14	King Faisal Hospital	Other	-	✓
15	Kinyinya	Health Center	12,667	✓
16	Nduba	Health Center	-	
17	Nyacyonga	Health Center	16,663	
18	Kimironko Prison	Prison Clinic	6,248	✓
19	Rubungo	Health Center	14,772	✓
20	Triade	Clinic	-	✓

### Muhanga District

#	Health Facility	Type	Population	On-site TB test
1	Birehe	Health Center	13,393	
2	Buramba	Health Center	24,142	
3	Gasovu	Health Center	14,625	
4	Gitarama	Health Center	36,686	
5	Gitega (Kibangu)	Health Center	23,226	✓
6	Kabgayi	Health Center	20,353	
7	Kabgayi Hospital	District Hospital	327,381	✓
8	Kivumu (Muhanga)	Health Center	20,158	✓
9	Mushishro	Health Center	32,515	✓
10	Nyabikenke	Health Center	42,173	✓
11	Nyabinoni	Health Center	19,173	
12	Nyarusange (Muhanga)	Health Center	25,995	✓
13	Gitarama Prison	Prison Clinic	-	✓
14	Rutobwe	Dispensary	33,895	✓
15	Shyogwe	Health Center	21,047	