



Assessment and Best Practices of
Joint TB and HIV Applications

Progress, Challenges, and Way Forward

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Executive Summary

1.1 Background

The Global Fund to Fight AIDS, Tuberculosis and Malaria's strategy requires countries with high TB/HIV co-infection to submit joint TB and HIV applications that present integrated and joint programming for the two diseases. The rationale for joint TB and HIV applications is to increase the utilisation of Global Fund resources for TB/HIV collaborative activities, improve the uptake of evidence-based global policies, address logistical and administrative challenges related to the introduction of updates to existing practices and systems, and reduce non-harmonized, non-standardized duplicative TB and HIV monitoring and evaluation (M&E) systems

To review progress in the implementation of joint TB and HIV applications, starting in May 2019, a team of Global Fund staff and external consultants conducted an assessment of 28 high TB/HIV burden countries that submitted joint applications during two funding cycles. While the assessment has some limitations, the results provide useful insights into how countries applied the policy on joint TB/HIV applications and, more importantly, how programs are evolving to address the high burden of co-infection with TB and HIV.

1.2 Objectives

The overall objective of the assessment was to evaluate the operationalization of the joint TB and HIV application, review progress and best practices in implementation, and document whether this approach has translated into the intended programmatic achievements.

1.3 Methods

A total of 28¹ high TB/HIV burden countries were included in the assessment. These were countries that were required by the Global Fund to submit a joint application for TB/HIV in the new funding model 1 cycle from 2014 to 2016 (NFM 1) and the new funding model 2 cycle from 2017 to 2019 (NFM 2). The key methodological approaches included:

- Desk review: A high-level portfolio analysis of grant making and investment was conducted for 28 countries for NFM 1 and NFM 2. In addition, a more in-depth portfolio analysis of budgeting for TB/HIV joint activities was conducted for 10² countries. The performance trend of 4 selected TB/HIV indicators was also reviewed.
- Interviews with TB and HIV program managers: Interviews were conducted with program staff from the 10 selected countries, along with program managers from 3 additional African countries, 2 Asian countries, and 2 countries not required to submit a joint TB and HIV application—for a total of 17 countries. The interviews focused on the processes and steps taken in the development of a joint TB and HIV application and implementation of joint TB and HIV programming and activities.
- Workshop: A workshop was held with representatives from the 10 selected countries and 3 additional African countries. Held in Kigali, the workshop focused on the discussion of best practices, challenges, solutions, and recommendations for the next funding cycle.

¹ Angola, Botswana, Cameroon, Central African Republic, Chad, Congo (Democratic Republic), Congo Brazzaville, Eswatini, Ethiopia, Ghana, Guinea-Bissau, India, Indonesia, Kenya, Lesotho, Liberia, Malawi, Mozambique, Myanmar, Namibia, Nigeria, Papua New Guinea, South Africa, Tanzania (United Republic), Thailand, Uganda, Zambia and Zimbabwe

² Eswatini, Ethiopia, Kenya, Malawi, Mozambique, Nigeria, South Africa, Tanzania (United Republic), Uganda and Zambia

1.4 Results

The following results include information from the desk reviews, interviews, and the workshop.

GRANT MAKING AND INVESTMENT – DESK REVIEW (28 COUNTRIES)

- The number of joint TB/HIV grants increased from 23 (26%) in NFM 1 to 30 (39%) in NFM 2.
- The proportion of HIV grants that addressed TB/HIV increased from 80% to 96% and the proportion of TB grants that addressed TB/HIV increased from 96% to 100%.
- The total budgets of TB/HIV grants increased from US\$1.0 billion in NFM 1 to US\$ 1.6 billion in NFM 2.
- The proportion of the budget allocated for TB/HIV collaborative activities was 1.7% in both NFM 1 and NFM 2 in the 28 countries.
- However, this proportion varied considerably between countries. In NFM 1 it ranged from 0% in the Central African Republic (CAR) and 0.1% in India to 7.7% in Angola and 12.6% in South Africa. In NFM 2 the proportion went from 0% in CAR and 0.1% in Ghana and Mozambique to 7.9% in Eswatini and 12.8% in Papua New Guinea.

IN-DEPTH PORTFOLIO ANALYSIS - DESK REVIEW (10 COUNTRIES)

- The budget allocated for TB/HIV collaborative activities in the TB/HIV modules decreased from US\$71.9 million (2.2% of total budget) in NFM 1 to US\$51.1 million (1.8%) in NFM 2 in the 10 selected countries (29% reduction in budget). However, when taking into account other TB/HIV-related activities (not allocated in the TB/HIV modules), the budget allocated for TB/HIV collaborative activities increased over time from 3.8% to 5.1% of the total budget (37% increase in budget).
- In the 10 countries, not all joint activities were included in the TB/HIV module. In NFM 2 an additional 42% of the TB/HIV budget was allocated to TB/HIV activities in other modules.
- The budget for isoniazid preventive therapy (IPT) increased considerably between NFM 1 and NFM 2, but is largely not included in the TB/HIV module.
- The proportion of the total budget allocated for GeneXpert-related activities doubled (from 0.8% to 1.6%) and the proportion allocated in the TB/HIV module increased from 20% to 39%.

ANALYSIS OF DATA ON FOUR GLOBALLY REPORTABLE TB/HIV INDICATORS - DESK REVIEW (28 COUNTRIES)

- The two best performing TB/HIV indicators in the 28 countries include: i) HIV testing among TB patients and ii) ART initiation among TB patients co-infected with HIV. These two indicators have been steadily increasing from 2010, with some countries reaching the global targets.
- IPT coverage and TB screening among people living with HIV (PLHIV) have a sub-optimal performance over a number of years, and many countries are missing data to make a meaningful comparison between NFM 1 and NFM 2, and between countries.

INTERVIEWS WITH TB AND HIV PROGRAM MANAGERS AND KIGALI WORKSHOP FINDINGS

1. Overall key findings:

- All countries indicated they have a functional TB/HIV program coordination mechanism in place at the national level, but mechanisms are either not available throughout the country or not functioning well at lower levels—except for Tanzania, Uganda, Ghana, Indonesia and Lesotho.
- Comprehensive joint program reviews—which include an epidemiological analysis and a gap analysis—have been or are being conducted in only 5 countries.

- In general, the joint TB and HIV application is considered relevant and the writing of the application is mostly done by both the HIV and TB programs.
- In 6 of the 17 countries, policy or structural changes were needed in order to accommodate the joint TB and HIV application. While most countries have separate service provision guidance for TB and HIV, the guidance does, however, cover co-infection, resulting in a conducive environment. Furthermore, the program management required to execute policies and plans for TB and HIV is generally effective.
- In terms of programmatic integration, just less than half of the countries have joint planning and joint supervisory visits. Only about a quarter have joint M&E plans and coordinated technical assistance (TA).
- Most countries use one health information system for HIV and TB data or this is under development. Most countries use the same laboratory and diagnostic services and one procurement and supply chain management system for HIV and TB.
- In general, TB and HIV health care workers at facility level are trained on the basic cross-cutting issues. Joint financing is still largely donor dependent.
- In general, there is a high level of partly integrated service delivery and the majority of countries indicate that the quality of care increased and that integrated services are more sustainable.
- In order to reduce the burden of TB in PLHIV, all countries offer TB screening and anti-TB treatment for PLHIV and initiate early ART. IPT initiation is problematic in a third of the countries. TB infection control is not optimal in almost half of the countries.
- In order to reduce the burden of HIV in patients with presumptive and diagnosed TB, all countries provide HIV testing services (HTS) to TB patients as well as ART and Co-trimoxazole.
- HIV prevention services are not provided to TB patients everywhere.
- Integration of TB and HIV services at community level is more limited – only 4 countries indicated that there was integration at this level as compared to facility level.
- Key populations are involved at national level, but their involvement is less notable at service provision level.

2. Best practices related to implementation of the joint TB and HIV application and integration of TB/HIV activities:

Process and steps in joint TB and HIV programming and development of the joint TB and HIV application

- When feasible, both the TB and HIV programs should be incorporated under a common directorate, with one director.
- A clear and comprehensive list of stakeholders (Ministry of Health, other ministries, donors, implementing partners, civil society, key affected populations, experts, universities) that will contribute to the joint TB and HIV application should be available before the country consultations are conducted.
- All identified stakeholders should be given the needed space and opportunity to contribute to the writing/grant making process. This facilitates the rapid implementation of the grant at a later stage.
- Countries should conduct a joint program review of the TB and HIV programs.
- The gap analysis should be done jointly and then the tasks should be divided.
- The investment case should be done jointly to improve resource allocation.
- A CCM subcommittee should lead the process on behalf of the CCM.
- The writing team should have a lead and support writer to consolidate discussions and inputs during the national consultations and conduct the write-up according to the Global Fund requirements.
- Sufficient TA should be available for the joint TB and HIV application writing/grant making process.
- A good costing team is needed to translate the narrative into budgets.

- Interventions for both TB and HIV should be prioritized based on current scientific evidence on impact and cost.
- Prime recipients (PRs) and sub-recipients (SRs) should be well informed on the Global Fund procedures and processes.
- A joint TB and HIV application facilitates the re-allocation of funds within and between the two programs— cost-sharing/co-funding for commodities, interventions.
- Merged financial accounts facilitate the management of the grant.

Harmonization of policy and program management

- When feasible a single, costed NSP is preferred. If not possible, each individual NSP should incorporate TB/HIV activities.
- Countries should develop: a) a TB preventative treatment (TPT) acceleration plan and update relevant TPT standard operation procedures and guidelines; b) a national plan and operational guide to find the missing TB cases; c) TB/HIV job aids; and d) a guideline and manual on the finalized and approved sample transport and referencing system. The TB LAM test should be included in both the TB and HIV national guidelines to assist in the diagnosis of TB in patients with advanced HIV disease.
- Local stakeholders should be engaged during supervisory visits.
- Results of TB/HIV activities should be reviewed regularly.

Monitoring and evaluation

- Tools that capture essential TB/HIV indicators should be harmonized.
- An electronic health record with modules for TB and HIV should be in place.
- Registers should be set up for TPT, GeneXpert, and TB LAM.
- TB/HIV data should be included in the DHIS2 (or a similar system).
- A joint M&E plan should be created (e.g., linked to a joint NSP).
- Continuous on-site monitoring of activities is necessary and allows for reprogramming.
- Data cleaning, validation, and analysis should be done jointly
- Quarterly and annual data review meetings should be conducted jointly.

Alignment of critical components of the health system

- Integrated training on TB and HIV should be provided in medical and nursing schools.
- Support of the GeneXpert platform should be provided by both programs; integrated use of GeneXpert – TB, viral load, EID, Human Papillomavirus.
- The same transportation system for specimen collection (and result delivery) should be used by both programs (e.g. scheduled and on-call; use local transport e.g. motorbikes).
- Remuneration/salaries should be harmonized across all the Global Fund supported programs (benchmarking).

Integrated TB and HIV service delivery

- Cough officers (TB screening clerks) should be used for screening PLHIV at every encounter with a health facility and cough triage (screening and separation of those that screen positive) should be conducted for those attending the health facility.
- Lay counsellors should be used to create demand for TPT among PLHIV (e.g., TPT part of the education package provided to patients).
- Screening for TB and use of TPT in eligible patients should be improved by sorting and colour coding of files in the health facility of patients screened for TB, not having active TB, but not initiated on TPT for easy identification by healthcare workers.
- Facilities should be renovated to accommodate TB infection control (e.g., setting up one-stop services).
- Patient support groups that integrate both TB and HIV activities should be established.
- Joint TPT forecasting and procurement using guidelines and electronic tools should be undertaken.

- The resources of each disease (e.g. purchase of GeneXpert, TPT) should be leveraged.
- Regular meetings should be conducted whereby facility staff meet to discuss integration issues.
- A central distribution warehouse delivering chronic medication to an accessible point of collection for the patient should be utilized.

Community systems strengthening

- TB community systems should be aligned to existing HIV systems.
- TB, HIV, and non-communicable diseases should be integrated into community activities.
- One social and behaviour change communication program should be developed for both diseases.

Operational and implementation research

- Joint operational and/or implementation research should be conducted to support the implementation of and effectiveness of integrated TB/HIV programs (e.g. identification of feasible strategies to link peripheral settings to laboratory services; assessment of TPT among PLHIV; documentation the different integration models used).

1.5. Way Forward

Recommendations

The following are recommendations for Global Fund and partners to consider during the next funding cycle:

- Simplify application templates including the narrative, programmatic gap analysis, funding landscape, and M&E framework.
- Loosen the application requirement that all CCM members need to sign the submission.
- Provide joint capacity building for staff of both programs to make the application process easier.
- Provide sufficient TA and financial support for the development of joint TB and HIV applications and the grant making process.
- Provide clear guidelines about the minimum level of required country consultations.
- Consider existing government budget systems.
- Revise the structure for grant management and financial management.
- Allow flexibility in the proportion of the budget that is allocated to the two disease programs.
- Increase funds allocated to resilient and sustainable systems for health (RSSH) and further disaggregate the module so that allocation to specific activities is clearly specified.
- Maintain biannual or annual disbursements of funds, as quarterly disbursements can be problematic.
- Ensure clear budget lines for the application process.
- Continue support for TB/HIV integration at all national, sub-national, and facility level.
- Support the development of joint costed NSPs, joint gap analyses, and joint investment cases for TB/HIV services.
- Repeat this assessment after the next funding cycle to determine progress over time, especially with respect to the implementation and impact of the joint TB and HIV application.

1. Background

1.1 Context and Rationale

Recognizing the importance of core TB-HIV collaborative services and the need for TB and HIV programs to work jointly, the Global Fund to Fight AIDS, Tuberculosis and Malaria Board's Strategy, Investment and Impact Committee determined that countries with high co-infection burden of TB and HIV should submit a joint TB and HIV application that presents integrated and joint programming for the two diseases (Global Fund Board Decision on Joint TB and HIV Concept Notes; Oct 2013).

The rationale behind this decision was driven by a number of factors including: i) slow uptake of evidence-based global policies; ii) logistical and administrative challenges related to the introduction of updates to existing practices and systems; iii) non-harmonized, non-standardized, and duplicative TB and HIV monitoring and evaluation (M&E) systems; iv) poor utilization of the Global Fund resources for TB/HIV collaborative activities (despite advocacy since 2004); and v) increased opportunity to enhance impact with submission of a joint TB and HIV application.

At the time, 41 countries with high TB and HIV co-infection were prioritized for the joint TB and HIV application submission. The critical areas for the joint TB and HIV programming included:

- Harmonisation of policy and program management—such as creating a conducive policy and program environment and ensuring effective program management for execution of policies and joint plans;
- Alignment of critical components of the health system—focusing on the health information system (HIS), procurement and supply chain management, health workforce, financing as well as laboratory systems;
- Integrated TB and HIV service delivery;
- Community systems strengthening; and
- Human rights, gender equity, and key populations engagement.

The joint TB and HIV application was viewed as important in order to:

- Stimulate country-led dialogue and related decision making among TB and HIV programs and stakeholders;
- Encourage the design of investments that tackle the two diseases in a more strategic way—calling for more effective joint approaches;
- Request and explore opportunities and synergies that exist in TB and HIV programs and the underlying health and community systems and other cross-cutting areas;
- Create an opportunity to reassess and re-program existing funds to maximize their usefulness; and
- Respond to the changing landscape of the diseases and better address co-infection.

1.2 Key considerations for submission of a joint TB and HIV application and joint planning

Under the joint TB and HIV application, joint planning by the two programs can be realized at all levels of the health system—including national, subnational such as districts and health facility level.

Countries are encouraged to consider efficient collaboration of the two programs across different components—such as conducting joint epi-assessments with involvement of experts from both programs. They are also encouraged to conduct joint TB and HIV program reviews through

consultation with Country Coordinating Mechanisms (CCMs) and the Fund Portfolio Manager (FPM), due to the clear advantages and feasibility of this approach—including timing, logistics, and epidemiology of the diseases. If a joint review is decided, priority and specific areas should be identified for TB and HIV programs through a national dialogue and epi-assessment.

Based on need, feasibility, and epidemiology of the diseases, countries with no National Strategic Plan (NSP) are encouraged to develop or update their TB and HIV NSP or create a joint TB and HIV NSP with due consideration of the synergies and priorities of the HIV and TB programming, the scaling up of collaborative TB/HIV activities, and the needs of the country. Similarly, depending on the need, feasibility, and epidemiology of the diseases in the country, provision of coordinated technical assistance (TA) for TB and HIV under the overall guidance of the CCMs is essential for the identified countries. Specific expertise for prioritized TB (e.g. multi-drug resistant (MDR) TB, Public Private Mix (PPM), TB case finding) and HIV (e.g. anti-retroviral treatment (ART), voluntary medical male circumcision (VMMC), prevention of mother-to-child transmission (PMTCT)) areas should be sought in a coordinated manner.

The integration of TB and HIV service delivery is also a key area, although the models of integrated TB and HIV service delivery vary from country to country. These range from TB facilities that refer for all HIV services and HIV facilities that refer for all TB services to TB facilities that provide some HIV services but refer for others and HIV facilities that provide some TB services but refer for others, to TB facilities that provide all HIV services and HIV facilities that provide all TB services.

Generally, the joint TB and HIV application initiative aims to promote a country-driven process that considers different country contexts. It recognizes the fact that the existing timelines for HIV and TB processes might present a challenge, but they can be harmonized over time. Ultimately, countries must make their own decision regarding what components will be integrated and how to coordinate the entire process.

2. Objectives

The objective of the current assessment was to review the progress in implementation of the joint TB and HIV application and to document whether or not this approach translated into the intended programmatic achievements.

2.1 Specific objectives

The specific objectives were to:

1. Review investment in TB/HIV collaborative activities since the New Funding Model (NFM);
2. Review the results of implementation of TB/HIV activities based on TB/HIV indicators, including trends over time from 2010-2018;
3. Identify policy and structural changes related to implementation of the joint TB and HIV application;
4. Review the level of programmatic and service integration and synergies for TB/HIV collaboration; and
5. Identify successes, challenges, best practices and recommendations related to implementation of the joint TB and HIV application.

3. Methods

3.1 Desk review

The joint TB and HIV application desk review included the 28 high TB/HIV burden countries (see Table 1 below) that were required by the Global Fund to submit a joint TB and HIV application in the 2017-19 funding cycle (NFM 2) and had also done so in the previous funding cycle (2014-2016; NFM 1). Note that the more detailed portfolio analysis (discussed below) included only 10 countries (in bold in Table 1).

Table 1. List of high TB/HIV burden countries that submitted a joint TB and HIV application

Angola	Eswatini	Lesotho	Papua New Guinea
Botswana	Ethiopia	Liberia	South Africa
Cameroon	Ghana	Malawi	Tanzania (United Republic)
Central African Republic	Guinea-Bissau	Mozambique	Thailand
Chad	India	Myanmar	Uganda
Congo (Democratic Republic)	Indonesia	Namibia	Zambia
Congo Brazzaville	Kenya	Nigeria	Zimbabwe

Key questions

1. First, a high-level portfolio analysis, including data on a limited number of budget indicators, was conducted for the 28 countries, with the aim to answer the following key questions:

- Grant making
 - Single grant: how many countries had a joint grant for TB/HIV?
 - Separate grants: how many countries had separate grants for each disease and addressed TB/HIV in the respective grants?
- Investment
 - Budget: how much was allocated/budgeted for TB/HIV collaborative activities in the grants?

2. Secondly, an in-depth portfolio analysis, including data from a larger set of indicators from the detailed budgets was conducted for the selected 10 countries with the aim to answer the following key questions:

- Investment
 - How much was allocated/budgeted in different modules?
 - How much was allocated/budgeted for joint activities in different grants?
 - Are all joint activities included in the TB/HIV module?
 - Was there a change in budget for Isoniazid Preventative Therapy (IPT)-related activities?
 - Was there a change in budget for GeneXpert-related activities?

3. Finally, data on four globally reportable TB/HIV indicators were analysed for the 28 countries to look at the performance trends over time (from 2010-2018).

Data sources

The data used for the desk review, including the sources, are summarized in Table 2. The joint TB and HIV application, related grant documents, and the detailed budgets for each of the 28

countries for NFM 1 and NFM 2 were provided by the Global Fund. In addition, TB/HIV indicator data from 2010 to 2017 was extracted from the global data repositories of the World Health Organisation (WHO)³ and the Joint United Nations Programme on HIV and AIDS (UNAIDS)⁴ for the following indicators:

- TB program indicators: TB screening among TB patients and ART initiation among TB/HIV co-infected patients
- HIV program indicators: IPT initiation in newly enrolled people living with HIV (PLHIV)

The Global Fund Progress Update and Disbursement Requests (PUDRs) provided additional data for 2018 for the four selected indicators—including 2015 to 2017 data for the indicator on TB screening among PLHIV.

Table 2. Data used in the desk review and their source

No	Data	Source
1.	Joint TB and HIV application, related grant documents, detailed budget for NFM 1 and NFM 2	The Global Fund
2.	Proportion of registered new and relapsed TB patients with documented HIV status	WHO
3.	Proportion of HIV-positive new and relapsed TB patients on ART during TB treatment	WHO
4.	Proportion of people living with HIV in care (including PMTCT) who are screened for TB in HIV care or treatment settings.	The Global Fund
5.	Proportion of people living with HIV newly enrolled in HIV care, started on TB preventive therapy	UNAIDS

Data analysis

TB/HIV indicators

Data from WHO, the Global Fund, and UNAIDS were merged by country on the selected four indicators. The trend of the four selected indicators was plotted based on the type of the Global Fund grant during the NFM 1 and NFM 2 as shown in Table 3. All the analyses were done using Stata version 15 (Stata Corp; Texas, United States of America).

Table 3. Analytical approach of the performance trend of the four indicators

Analysis		Description	
Trend of performance of the four indicators		<ul style="list-style-type: none">Country trend performance of the four indicators against the Key Performance Indicators (KPI) of the Global Fund.KPI are also aligned to the global targets.Time: 2010 to 2018	
Stratified analysis by type of TB/HIV grants		<ul style="list-style-type: none">Countries stratified based on the TB/HIV grant implemented during NFM 1 and NFM 2.	
		Category	NFM 1NFM 2
		1	TB and HIV disease specific grants

³ <http://apps.who.int/gho/data/view.main.TBHIVCountry?lang=en>

⁴ <http://aidsinfo.unaids.org/>

	2	TB and HIV disease specific grants	TB and HIV disease specific and TB/HIV grants
	3	TB and HIV disease specific grants	Single TB/HIV grant
	4	TB and HIV disease specific grant and TB/HIV grant	
	5	Single TB/HIV grant	

3.2 Interviews with HIV and TB Program Managers

HIV and TB program managers (or representatives) of 17 countries were interviewed to get further information on the joint TB and HIV application processes using a standard questionnaire. The following countries were included:

- Interviews with the **10 African countries** for which the in-depth portfolio analysis was conducted (shown in bold in Table 1). In the cases where program managers were not available for an interview, written feedback on the questionnaire was obtained.
- Written feedback was obtained from representatives of an additional **3 African countries** (Ghana, Lesotho and Zimbabwe) who attended the workshop in Kigali (discussed below).
- Interviews with representatives from **2 Asian countries** (Thailand and Indonesia).
- Interviews with representatives from **2 countries** (Ukraine and Haiti) that submitted a joint TB and HIV application without having that requirement from the Global Fund.

The key topics discussed in the interviews were:

- The process and steps in joint TB and HIV programming and development of the joint TB and HIV application
 - TB/HIV program coordination mechanism
 - Joint program reviews, epidemiological analysis, gap analysis
 - Relevance of the joint TB/HIV application and joint writing
- Implementation of joint TB/HIV programming
 - Harmonisation of policy and program management
 - Alignment of critical components of the health system
 - Integrated TB/HIV service delivery
 - Community systems strengthening and key population engagement

3.3 Kigali workshop

Finally, a workshop that brought together the TB and HIV program managers from the 10 African countries included in the in-depth budget analysis—as well as Ghana, Lesotho and Zimbabwe—was conducted for 3 days from the 10th to 12th July 2019, in Kigali, Rwanda. The hosting country, Rwanda, was also present at the meeting, but related results are not included in the analysis as the country did not submit a joint TB and HIV application. For some countries, representatives of non-governmental principal recipients (PRs) and civil society attended, along with representatives of the Global Fund, WHO, United States President's Emergency Plan for AIDS Relief (PEPFAR), and Stop TB Partnership.

The aim of the workshop was to present and discuss the findings from the desk review and interviews, and to obtain additional information on best practices, challenges, and recommendations for the implementation of the joint TB and HIV application. To prepare for these discussions, countries had been requested to complete a standard presentation format relating to

the above issues. The information retrieved from the workshop was analysed and also includes the responses regarding the best practices, challenges, solutions and the way forward from Thailand, Indonesia, Ukraine and Haiti that were provided via interview/written feedback.

3.4 Limitations of the assessment

The approach as described above has some limitations:

- The budget reviews largely looked at data aggregated for the countries, thus changes in individual countries are not acknowledged.
- Due to the fact that expenditure data was not readily available, the analyses have been conducted only on the budgeted amounts.
- Costs of ART are not extrapolated relative to the burden of co-infection in the included countries, which leads to an underestimation of the actual budget for joint TB and HIV programming. The same is the case for TB screening, drugs for PLHIV, and HIV testing costs for TB patients—which are in general included under TB and HIV budgets, respectively.
- It was not possible to analyse performance for the indicator ‘proportion of people living with HIV newly enrolled in HIV care with active TB disease,’ as many countries had no data for this indicator.
- The ‘performance of TB/HIV indicators’ assessment was done at the national level and other implementing partners with different funding sources may have contributed to overall country performance.
- Related to the above, the interviews and the discussions during the workshop were focused on retrieving information on issues “due to the implementation of the joint TB and HIV application”. However, it was sometimes difficult to separate these from changes that happened due to other influences pushing countries to integrate TB and HIV.
- The interviews and information retrieved from the workshop came from HIV and TB program managers (or representatives) working at the national level. This might not fully reflect the situation on the ground at facility level. Also, there were only a few civil society representatives attending the workshop, so their perspective, while included, is also limited.
- Although in the desk review changes over time are included, there is only limited analysis of trends as retrieved via the interviews and the workshop. In the final section of this report, some comparison is made with results from an earlier workshop, although at that time, limited information was available on the actual implementation of the joint TB and HIV application.

4. Results

4.1 High-level portfolio analysis

The high-level portfolio analysis was conducted for the 28 countries that submitted a joint TB and HIV application (Table 1). Note that Namibia only received a grant in NFM 2. During NFM 1 the country did not receive new grants but received an extension of existing TB and HIV grants.

Key finding 1:

- The number of joint TB/HIV grants increased from 23 (26%) in NFM 1 to 30 (38.5%) in NFM 2.

In NFM 1, the 27 joint TB and HIV applications that were submitted translated into 88 grants with 75 unique PRs (see Figure 1). Among those there were 23 joint TB/HIV grants, 26 TB grants, and 39 HIV grants. In NFM 2, the 28 joint TB and HIV applications that were submitted resulted in 78 grants with 66 unique PRs: 30 TB/HIV, 22 TB, and 26 HIV grants. So, over the two funding cycles, the proportion of combined grants increased from 26% in NFM 1 to 38.5% in NFM 2. The proportion of TB grants slightly decreased from 30% in NFM 1 from to 28% in NFM 2, while the proportion of HIV grants considerably decreased from 44% in NFM 1 to 33% in NFM 2 (see Figure 2)

Figure 1. Grants from joint TB and HIV applications

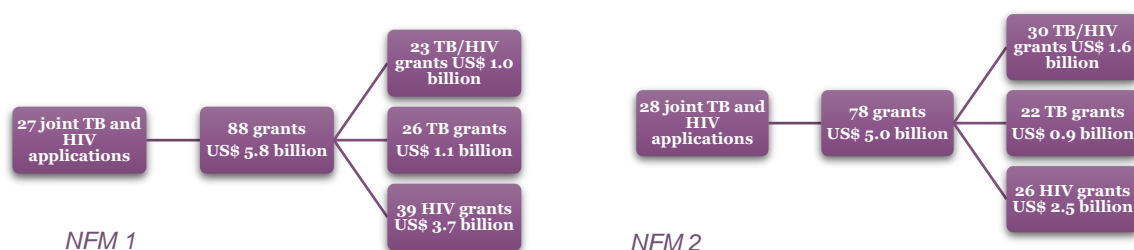
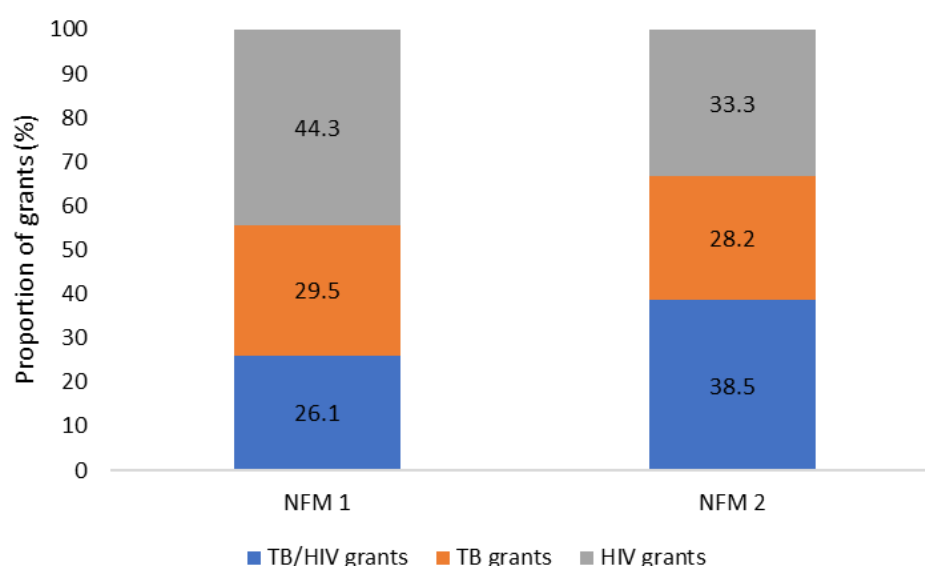


Figure 2. Proportion of TB/HIV, TB and HIV grants out of all grants



Key finding 2:

- The proportion of HIV grants that addressed TB/HIV increased from 80% in NFM 1 to 96% in NFM 2
- The proportion of TB grants that addressed TB/HIV increased from 96% in NFM 1 to 100% in NFM 2.

Of the 27 applications in NFM 1, 7 countries had joint TB/HIV grants only, 16 countries had disease specific grants only, and 4 countries had both joint and disease specific grants (see Table 4). Of those 16 that had disease specific grants only, 50% had one PR for both the TB and HIV grant. Furthermore, 80% of HIV grants in the 16 countries did address HIV/TB activities (either covered by the TB/HIV module, or by specific activities covered in other modules) and 96% of the TB grants did address TB/HIV activities. Finally, in 62% (10 out of 16) of the countries, the HIV and TB grant had the same start and end date—potentially facilitating joint program review and planning.

In NFM 2, the number of countries that had joint grants increased to 12 and the number of countries that had both joint and disease specific grants increased to 8—with only 8 countries remaining that had only disease-specific grants. Of the latter, 63% had the same PR for both the TB and HIV grant, which is a slight increase from the previous funding cycle. Furthermore, the number of HIV grants in the 8 countries that did address TB/HIV activities increased to 96% and in NFM 2 all (100%) of the TB grants addressed joint activities. Finally, most grant periods were aligned—88% of countries (7 out of 8) with disease specific grants had the same start and end date of the HIV and TB grants.

Table 4. Countries with TB/HIV grants only, both TB/HIV and disease specific grants, and disease specific grants only in NFM 1 and NFM 2

	NFM 1	NFM 2
TB/HIV grants only	Botswana	Botswana
	Central African Republic	Central African Republic
	Lesotho	Lesotho
	Malawi	Malawi
	South Africa	South Africa

	Thailand Zambia	Thailand Zambia Congo Brazzaville Eswatini Guinea-Bissau Papua New Guinea Namibia
Both TB/HIV and disease specific grants	Liberia Mozambique Tanzania (United Republic) Uganda	Liberia Mozambique Tanzania (United Republic) Uganda Congo (Democratic Republic) Ghana India Nigeria
Disease specific grants only	Angola Cameroon Chad Ethiopia Indonesia Kenya Myanmar Zimbabwe Congo Brazzaville Eswatini Guinea-Bissau Papua New Guinea [Namibia] Congo (Democratic Republic) Ghana India Nigeria	Angola Cameroon Chad Ethiopia Indonesia Kenya Myanmar Zimbabwe

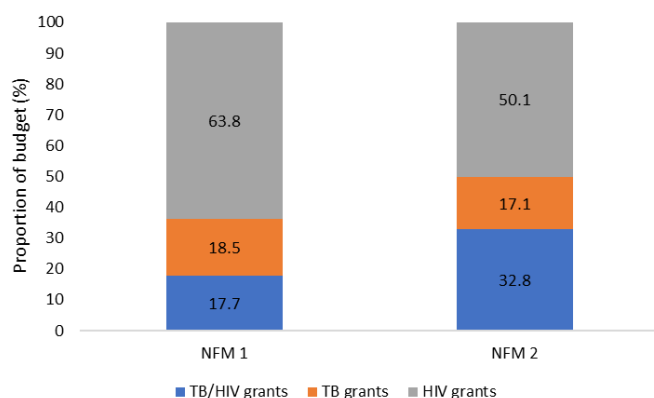
Key finding 3:

- The TB/HIV grants total budgets increased from US\$1.0 billion in NFM 1 to US\$ 1.6 billion in NFM 2.
- The proportion of the budget allocated for TB/HIV collaborative activities was 1.7% in both NFM 1 and NFM 2 in the 28 countries.

The 23 joint TB/HIV grants accounted for 18% (US\$ 1.0 billion) of the overall US\$ 5.8 billion budgeted for all 88 grants in NFM 1 (see Figure 3). The 26 TB grants accounted for 19% (US\$ 1.1 billion) and the 39 HIV grants accounted for almost two thirds of the budget (64% - US\$ 3.7 billion). In NFM 2, the 30 joint grants now contributed a third to the total budget (33%, US\$ 1.6 billion out of the total budget of US\$ 5.0 billion for 78 grants). The HIV grants still contributed to half of the budget (50% - US\$2.5 billion) and the TB grants contributed 17% (US\$ 0.9 billion) (see Figure 1).

In the four countries that had both joint TB/HIV and disease specific grants in NFM 1 and 2, the proportion of the budget for the TB/HIV grants out of the total budget grants increased marginally in all of countries (average 4%).

Figure 3. Proportion of budget in TB/HIV, TB and HIV grants out of the total budget, NFM 1 and NFM 2



When submitting a joint TB and HIV application to the Global Fund, countries provide a disaggregated budget that is split across different modules. Under the TB/HIV module, for example, countries budget resources allocated to TB/HIV collaborative interventions, community TB/HIV care delivery, engaging all care providers, key affected populations, and routine reporting.

In NFM 1, 1.7% (US\$ 1.0 billion) of the total grants budget was included in the TB/HIV module and this remained the same in NFM 2 (1.7% - US\$ 0.8 billion). However, the proportion of the budget allocated for TB/HIV collaborative activities varied considerably between countries. In NFM 1 it ranged from 0% in the Central African Republic (CAR) and 0.1% in India to 7.7% in Angola and 12.6% in South Africa. In NFM 2 the proportion ranged from 0% in CAR and 0.1% in Ghana and Mozambique to 7.9% in Eswatini and 12.8% in Papua New Guinea. The proportion of the budget allocated for TB/HIV collaborative activities also varied considerably within some countries over time—with some countries increasing from NFM 1 to NFM2 (e.g., Kenya, Eswatini, and Papua New Guinea) and other countries decreasing (e.g., South Africa, Angola, and Botswana).

An analysis of the type of grants reveals that in NFM 1, 54% of the total budget of the TB/HIV module was in joint grants, 32% was in TB grants, and 14% was in HIV grants. In NFM 2 this shifted slightly: 46% of the budget was in joint grants (decrease), 43% was in TB grants (increase), and 11% was in HIV grants (slight decrease).

4.2 In-depth portfolio analysis

The in-depth portfolio analysis was conducted for 10 countries only (see Table 1). These 10 countries received 55% of the total budget of the 28 countries in NFM 1 and 57% of the total budget in NFM 2.

To summarize the key data for these 10 countries:

- **The distribution of the different grants stayed largely the same over the two funding cycles:** In NFM 1, these countries had 37 grants, of which 15 were joint (41%), 9 were TB (24%), and 13 were HIV (35%). In NFM 2, there were 32 grants: 14 joint (44%), 8 TB (25%), and 10 HIV (31%).
- **Over the two funding cycles two additional countries received joint grants:** In NFM 1, 3 of the 10 countries had joint grants only; 3 had both joint and disease specific grants; and 4 had only disease specific grants. This changed to 4 (joint grants only), 4 (joint and disease specific); and 2 (disease specific), respectively in NFM 2. Eswatini moved from disease specific grants only to joint grants only, and Nigeria to a combination of joint and disease specific grants. Ethiopia and Kenya continued to have separate grants, but Kenya had the same PR for both grants. In both countries, the disease specific grants did address TB/HIV co-infection and the running periods of the grants were the same.
- **Related to the above, the proportion of the allocated budget to joint grants increased from 26% to 39% from NFM 1 to NFM 2:** The 15 joint TB/HIV grants accounted for about a quarter (26% - US\$ 0.8 billion) of the overall US\$ 3.2 billion budgeted for all 37 grants in NFM 1. The 9 TB grants accounted for 13% (US\$ 0.4 billion) and the 13 HIV grants for 61% (US\$ 2.0 billion). In NFM 2, the 14 joint grants now contributed 39% (US\$ 1.1 billion out of the total budget of US\$ 2.8 billion for 32 grants). The HIV grants still contributed to half of the budget (52% - US\$ 1.5 billion) and the TB grants to 9% (US\$ 0.3 billion).

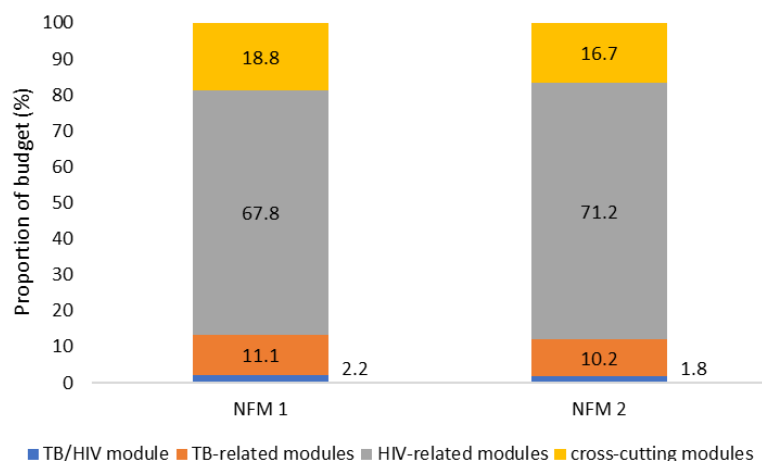
Key finding 4:

- The budget allocated for TB/HIV collaborative activities in the TB/HIV module decreased from US\$71.9 million (2.2% of total budget) in NFM 1 to US\$51.1 million (1.8%) in NFM 2 in the 10 selected countries (29% reduction in budget).

As indicated earlier, when submitting a joint TB and HIV application to the Global Fund countries provide a disaggregated budget that is split across different modules. Besides the TB/HIV module, there are HIV-related modules (e.g. prevention programs; PMTCT; Treatment, care and support; HIV testing services), TB-related modules (MDR-TB; TB care and prevention) and cross cutting modules (e.g. health systems, program management).

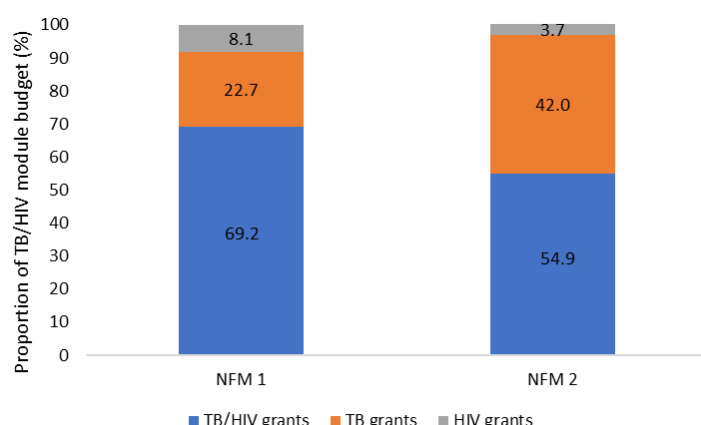
In NFM 1, 2.2% of the total grants budget were included in the TB/HIV module (US\$ 71.9 million), 68% or two-thirds in HIV-related modules (US\$ 2.2 billion), 11% in TB-related modules (US\$0.4 billion) and 19% in cross-cutting modules (US\$ 0.6 billion) (see Figure 4). For the TB/HIV module this slightly decreased to 1.8% in NFM 2 (US\$ 21.5 million), with 71% included in HIV-related modules (US\$ 2.0 billion), 10% in TB-related modules (US\$ 0.3 billion), and 17% in cross-cutting modules (US\$ 0.5 billion).

Figure 4. Proportion of budget in different modules, NFM 1 and NFM 2



Analysis of the type of grants indicates that in NFM 1, 69% of the total budget of the TB/HIV module was in joint grants, 23% in TB grants and 8.1% in HIV grants (see Figure 5). In NFM 2 this shifted: despite an increase in the number and budget of joint grants, the proportion of the TB/HIV module covered in joint grants showed a considerable decrease to 55%. The proportion in TB grants showed a large increase to 42% in NFM 2, while the number of TB grants and the budget decreased compared to NFM 1. In NFM 2, 4% of the TB/HIV module was included in HIV grants.

Figure 5. Proportion of TB/HIV module budget in TB/HIV, TB and HIV grants, NFM 1 and NFM 2



Key finding 5:

- Not all joint activities are included in the TB/HIV module. In NFM 2 an additional 42% of the TB/HIV budget was allocated to TB/HIV activities in other modules.

When reviewing the detailed budget activities included in the different grants it was noted that some activities labelled as “TB/HIV” or “TB and ART” or “joint” or “integrated” (e.g. program reviews, supervision, coordination, training) were included in other modules than the TB/HIV module. In NFM 1, the total amount budgeted for these activities was US\$ 17.3 million (0.5% of the total budget); this is an additional quarter of the TB/HIV module budget (24%). In NFM 2, US\$ 21.3 million (0.8% of the total budget) or an additional 42% of the TB/HIV module budget was included for joint activities in other modules.

Key finding 6:

- For NFM 1, IPT-related budget activities accounted for US\$ 15 million (0.5% of total budget), of which US\$ 12 million (77% of the IPT budget) was not included in the TB/HIV module.
- For NFM 2, IPT-related budget activities increased considerably to 54 million (1.9% of the total budget), of which US\$ 44 million (83%) was not included in the TB/HIV module.

When looking at IPT—which is a TB/HIV related activity— the budget increased considerably between NFM 1 and NFM 2, but is largely not included in the TB/HIV module. In NFM 1, 6 of the 10 countries included IPT-related activities in the budget: 1 country included the full amount in other modules, 3 included part of the amount in the TB/HIV module, and only 2 included the full amount in the TB/HIV module. In NFM 2 an additional country included IPT-related activities in the budget: 4 countries included it fully in other modules, while 3 included it fully in the TB/HIV module.

Key finding 7:

- The proportion of the total budget allocated for GeneXpert-related activities doubled (from 0.8% to 1.6%) and the proportion allocated in the TB/HIV module increased from 20% to 39% from NFM 1 to NFM 2.

Since GeneXpert is also used to diagnose TB in PLHIV (and early infant diagnosis (EID) of HIV and viral load testing), depending on, for example, the co-infection epidemiology and TB screening coverage among PLHIV in a country, a considerable part of the costs for GeneXpert-related activities should also be considered in the joint budget. All 10 countries included a budget for GeneXpert-related activities in NFM 1 and 9 countries included them in NFM 2.

In NFM 1, US\$ 25 million was included for GeneXpert-related budget activities (0.8% of the total budget). Only 4 countries included this budget in the TB/HIV module (3 fully, 1 partly). US\$ 20 million (80%) of the budget was included in modules other than the TB/HIV module (e.g. MDR-TB, TB care and prevention).

The budget for GeneXpert almost doubled to US\$ 46 million in NFM 2 (1.6% of the total budget). Five countries included the budget in the TB/HIV module (1 fully, 4 partly). US\$ 21 million (61%) was included in modules other than the TB/HIV module.

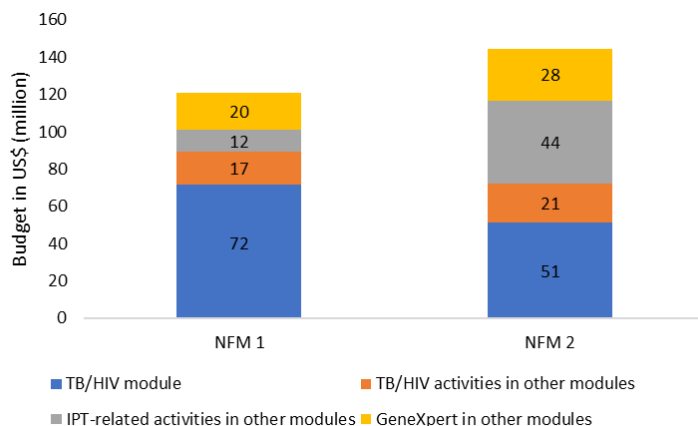
So, the majority of the budget for GeneXpert-related activities is included in modules other than the TB/HIV module and the countries co-infection epidemic and response should determine what part of this budget should actually be allocated to the joint module.

Key finding 8:

- When taking other TB/HIV-related activities into account (not allocated in the TB/HIV modules), the budget allocated for TB/HIV collaborative activities increased over time (from 3.8% to 5.1% of the total budget or a 37% increase in budget).

If the budget for TB/HIV activities, IPT-related activities, and all GeneXpert-related activities in other modules are added to the budget for the TB/HIV module, the total budget increases to US\$ 120.8 million in NFM 1 (3.8% of the total budget) and US\$ 145.0 in NFM 2 (5.1% of the total budget) (see Figure 6). So, both in terms of the actual amount and the proportion of the total budget there is an increase from NFM 1 to NFM 2.

Figure 6. Budget in US\$ (million) for TB/HIV module and TB/HIV-related activities in other modules, NFM 1 and NFM 2.



Key finding 9:

- The budget for antiretrovirals is fully allocated to other modules than TB/HIV.

Although antiretrovirals are also used by TB patients diagnosed with HIV to reduce mortality and ART is crucial to prevent TB in PLHIV, the 9 countries that included this as a cost input in NFM 1 included the full budget amount (USD 1.1 billion – 35% of total budget) in modules other than TB/HIV (Treatment care and support, PMTCT, prevention programs). In NFM 2, seven countries included antiretrovirals as a cost input and it comprised 26% of the total budget (0.7 billion). Again, the full budget was included in modules other than TB/HIV.

4.3 TB/HIV indicators analysis – demonstrating impact

Types of grants in NFM 1 and NFM 2

The countries reviewed were grouped into 5 categories based on the Global Fund grants implemented in the country for NFM 1 and NFM 2 (see Table 4 on pg. 15).

- 8 countries implemented TB and HIV disease specific grants for both NFM 1 and NFM 2;
- 4 countries had TB and HIV disease specific grants in NFM 1 and transitioned to a combination of TB and HIV specific grants and TB/HIV grant in NFM 2;
- 5 countries transitioned from TB and HIV specific grants to single TB/HIV grants;
- 4 countries implemented the combined TB and HIV disease specific grants and TB/HIV grant for both NFM 1 and NFM 2; and
- The remaining 7 countries had single TB/HIV grant for both NFM 1 and NFM 2.
- Overall TB/HIV indicators performance trend

Overall performance trends for the four indicators are mixed in all five categories based on the grants implemented for both NFM 1 and NFM 2. Overall, there is a gradual increase in performance trend of the four indicators in all 28 countries as shown in Figure 7 through 12.

The two best performing indicators are i) HIV testing among TB patients; and ii) ART initiation among TB patients co-infected with HIV. These two indicators have been steadily increasing from 2010, with some countries reaching the global targets of testing all TB patients for HIV (100%) and ART initiation to ≥90% of TB/HIV co-infected patients. To note, all the countries have consistently provided these data for both NFM 1 and NFM 2. IPT provision to newly enrolled PLHIV data is not

available for all the countries, and data availability varies by countries. The general trend is increasing in coverage IPT to PLHIV in countries with data. But none of the countries has reached a target of >90% of PLHIV on IPT. The 'TB screening among PLHIV' performance trend is low in all the countries.

TB/HIV trend performance by type of grant

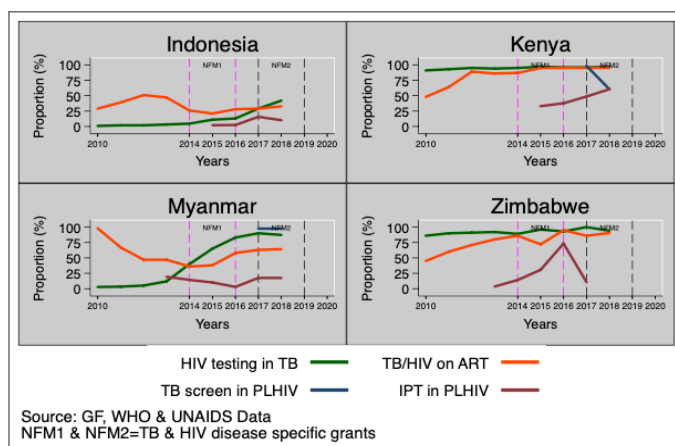
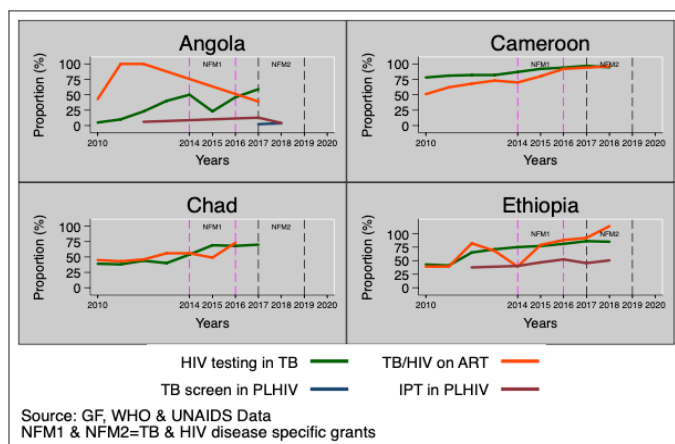
In each of the categories, there are quite diverse trends in performance levels of the four indicators:

Category 1: TB and HIV disease-specific grants for NFM 1 and NFM 2

Cameroon, Kenya, and Zimbabwe have performed well for the two indicators on HIV testing and provision of ART. Indonesia's overall performance is the lowest in all reported indicators in this grant category (see Figure 7). Of the 8 countries, 6 had data on ART coverage among TB/HIV co-infected patients (see Table 5). Four countries of the six countries with data (67%)—namely Cameroon, Ethiopia, Kenya, and Zimbabwe—reached the target ($\geq 90\%$) of putting TB/HIV co-infected patients on ART for 2018.

The other TB/HIV indicators reviewed were the global targets. Ethiopia and Kenya reached the target in 2017 for ART coverage, and an additional two countries—Cameroon and Zimbabwe—reached the target in 2018. Angola's performance in all indicators is below the global targets, with only HIV testing in TB patients showing a slow steady increase. However, ART initiation among TB/HIV co-infected patients has been declining from around 2012. The reason for such decline in important services warrants further investigation.

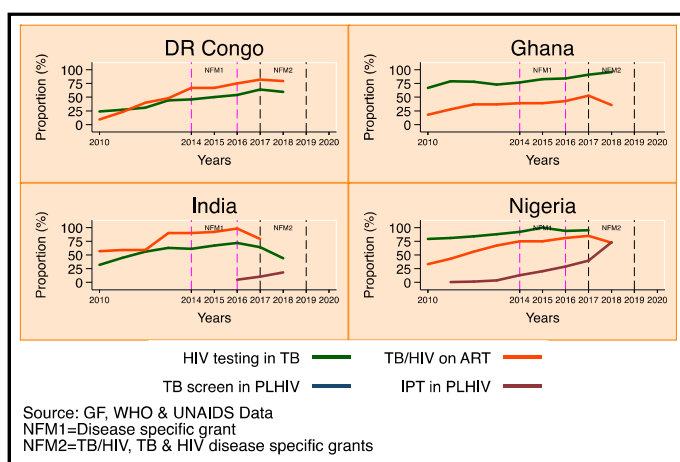
Figure 7. Performance trend of TB/HIV indicators for countries with TB and HIV disease specific grants for both NFM 1 and NFM 2.



Category 2: NFM 1 - TB & HIV disease specific grants and NFM 2 - combined TB/HIV, TB and HIV disease specific grants

All countries show a steady increase in the performance trend of the TB/HIV indicators, especially HIV testing in TB patients and ART initiation in TB/HIV co-infected patients as shown in Figure 8. However, a decrease in ART initiation among TB/HIV co-infected patients was observed in Ghana, India, and Nigeria. Nigeria—compared to the other three countries in this category—has made significant progress in IPT uptake among PLHIV. However, on review of the performance against the set targets, none of the countries has reached the global targets (see Table 5), at least for the years 2017 and 2018.

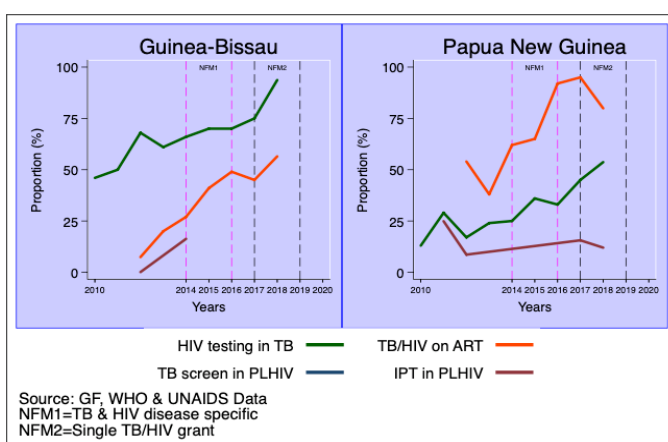
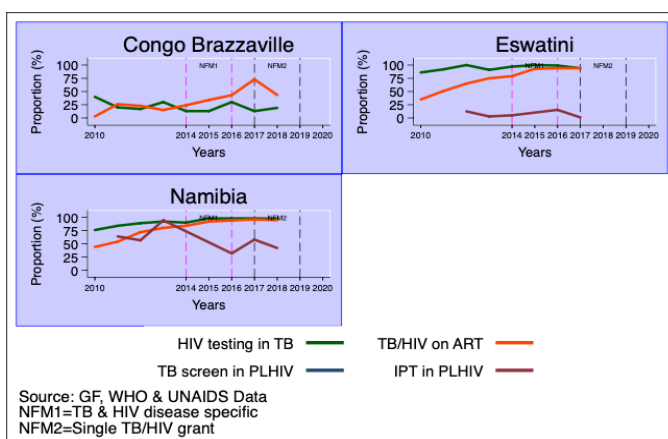
Figure 8. Performance trend of TB/HIV indicators for TB and HIV disease specific grants in NFM 1 and the combination of disease specific grants and TB/HIV grants in NFM 2.



Category 3: NFM 1 – TB & HIV disease specific grants and NFM 2 – single TB/HIV grant

Eswatini's overall performance is good compared to the other three countries for HIV testing and ART initiation among TB/HIV co-infected patients. Congo Brazzaville has the lowest performance for the two indicators the country reported on (see Figure 9). Table 5 shows that Papua New Guinea had attained the target of ART initiation in 2017, but dropped in 2018 for the same indicators. Namibia had sustained the achievement of the target for ART in 2017 and 2018.

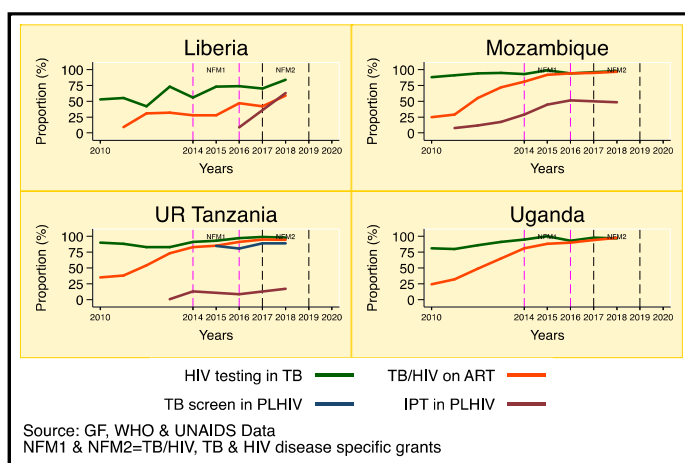
Figure 9. Performance trend of TB/HIV indicators for TB and HIV disease specific grants for NFM 1 and single TB/HIV grant for NFM 2.



Category 4: NFM 1 and 2 - combined TB/HIV, and TB and HIV disease specific grants

Mozambique and Tanzania have sustained good performance of at least HIV testing among TB patients and ART provision among TB/HIV co-infected patients. Mozambique leads in providing IPT among PLHIV (see Figure 10). As for ART initiation, Mozambique, Tanzania and Uganda achieved the target in both 2017 and 2018 (Table 5).

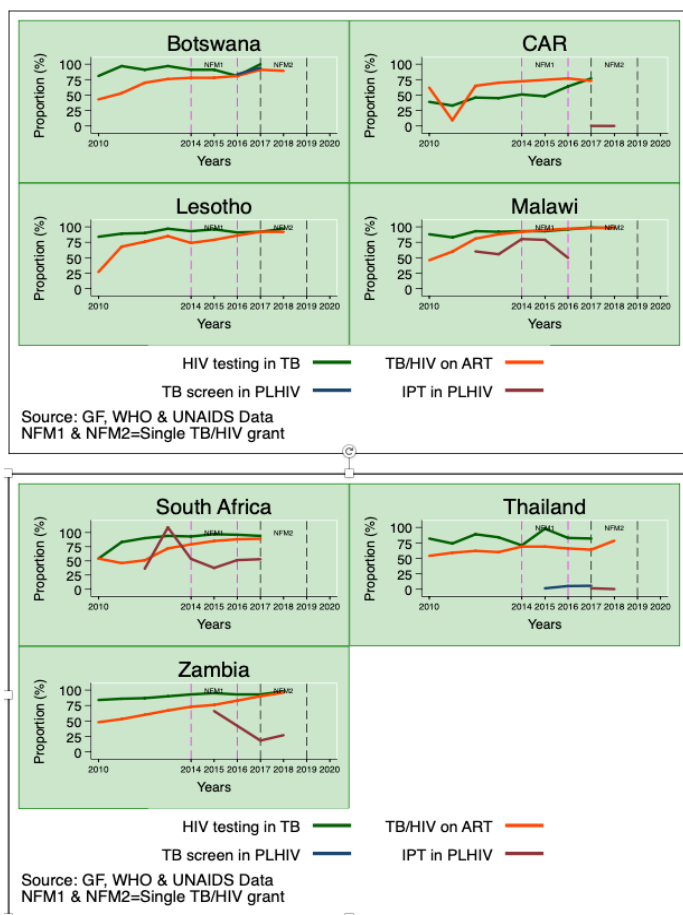
Figure 10. Performance trend of TB/HIV indicators for countries with a combination of TB and HIV disease specific and TB/HIV grants for both NFM 1 and NFM 2.



Category 5: NFM 1 and 2 - TB/HIV single grant

Four of the countries in this category had good performance of ART initiation among TB/HIV co-infected patients. Central Africa Republic and Thailand have relatively sub-optimal performance on the trend of the TB/HIV indicators (see Figure 11). Botswana, Lesotho, Malawi, and Zambia attained the target in ART initiation for 2018. But in 2018, Botswana slightly dropped below the global target (see Table 5).

Figure 11. Performance trend of TB/HIV indicators for countries with a single TB/HIV grant for both NFM 1 and NFM 2.



In conclusion, there is quite a diversity in the performance by countries on the TB/HIV indicators. In each grant category there are best performing countries especially for the two indicators, namely HIV testing in TB patients and provision of ART among TB and HIV co-infected patients. In the last 10 years, 9 countries reached IPT coverage of above 50%—namely Ethiopia, Kenya, Liberia, Malawi, Namibia, Nigeria, South Africa, Zambia, and Zimbabwe. South Africa, in particular, reached 100% in 2013. However, these achievements are reversing in some of the countries (Ethiopia, South Africa, Zambia), which raises questions about what is contributing to their lower performance.

Table 5. Performance of countries in selected TB/HIV indicators for 2017 and 2018.

Country	Grant Type	2017				2018			
		<i>IPT (%)</i>	<i>ART for TB/HIV</i>	<i>HIV test</i>	<i>TB screen in PLHIV</i>	<i>IPT (%)</i>	<i>ART for TB/HIV</i>	<i>HIV test</i>	<i>TB screen in PLHIV</i>
		≥90%	≥90%	100%	100%	≥90%	≥90%	100%	100%
Angola	NFM 1 & 2-Disease specific	12.8	39	59	2.2	4.2			3.7
Cameroon	NFM 1 & 2-Disease specific			97			96.1	94.5	76.8
Chad	NFM 1 & 2-Disease specific			70					
Ethiopia	NFM 1 & 2-Disease specific	45.5	92	86		50.5	113.6	84.9	0
Indonesia	NFM 1 & 2-Disease specific	15.6	29	29		10.2	32.7	42	79.4
Kenya	NFM 1 & 2-Disease specific		95	96	98.3	60.6	95.3	97.2	60.4
Myanmar	NFM 1 & 2-Disease specific	17.5	63	90	97.6	17.5	64.2	87.3	97.3
Zimbabwe	NFM 1 & 2-Disease specific	10.7	86	100			90.5	94.1	95.3
Congo Brazzaville	NFM 1=TB&HIV & NFM 2=TB/HIV only		73	13			43.4	19.1	
Eswatini	NFM 1=TB&HIV & NFM 2=TB/HIV only	1	94	94					
Guinea-Bissau	NFM 1=TB&HIV & NFM 2=TB/HIV only		45	75			56.5	93.7	
Papua New Guinea	NFM 1=TB&HIV & NFM 2=TB/HIV only	15.6	95	45		12	79.9	53.7	
Namibia	NFM 1 & NFM 2=TB/HIV only	14.8	96	98		42	94.7	97.5	87.4
Congo (Democratic Republic)	NFM 1=TB&HIV & NFM 2=TB&HIV and TB/HIV		82	64		48.3	79.5	59.7	65.6
Ghana	NFM 1=TB&HIV & NFM 2=TB&HIV and TB/HIV		53	91			35.7	95.6	50
India	NFM 1=TB&HIV & NFM 2=TB&HIV and TB/HIV	10.5	79	64		18.3		43.9	67.6
Nigeria	NFM 1=TB&HIV & NFM 2=TB&HIV and TB/HIV	39.5	85	95		73.4	72.5		77.6
Liberia	NFM 1 & NFM 2=TB/HIV, TB & HIV		42	70		62.9	58.8	83.8	51.7
Mozambique	NFM 1 & NFM 2=TB/HIV, TB & HIV		95	96		48.3	96.7	97.8	65
Tanzania (United Republic)	NFM 1 & NFM 2=TB/HIV, TB & HIV		95	99	88.9	16.9	94.6	97.8	88.7
Uganda	NFM 1 & NFM 2=TB/HIV, TB & HIV		94	98		8.6	97.4	96.7	
Botswana	NFM 1 & NFM 2=TB/HIV only		91	100	94.2		89.3		
CAR	NFM 1 & NFM 2=TB/HIV only	0.1	73	77	5.9	0			
Lesotho	NFM 1 & NFM 2=TB/HIV only		92	92			91.9	97	78.8
Malawi	NFM 1 & NFM 2=TB/HIV only		98	99			99.2	97.8	99.1
South Africa	NFM 1 & NFM 2=TB/HIV only	52.9	89	94					
Thailand	NFM 1 & NFM 2=TB/HIV only		64	82	5.5	0.2	78.5		
Zambia	NFM 1 & NFM 2=TB/HIV only	18.3	90	93		27	96	97.9	

4.4 Interviews with HIV and TB program managers

The HIV and TB program managers (or representatives) of 17 countries were interviewed to get further information on the joint TB and HIV application processes. Although the aim of the interviews was to highlight issues related to the implementation of the joint TB and HIV application, some countries also mentioned issues related to TB/HIV integration in general.

- Process and steps in joint TB and HIV programming and development of joint TB and HIV applications

Key finding 1 - TB/HIV program coordination mechanisms: All countries indicated that they had a functional TB/HIV program coordination mechanism in place at the national level, but mechanisms are either not available throughout the country or not functioning well at lower levels, except for five countries.

- At the national level the coordination mechanism is mostly in the form of technical working groups (TWGs) and/or TB/HIV focal points within both programs, and/or it takes place within the CCM (Ethiopia, South Africa, Indonesia). Ukraine, however, indicated that coordination of public health services/primary healthcare is better than coordination of specialized care. Nigeria is experiencing problems with funding for national meetings, and, as a result, other existing meetings are used to discuss joint TB/HIV issues.
- At lower levels, there are often separate HIV and TB coordinators or focal points. But, there are no TB/HIV integrated coordinators or focal points, or any other coordination mechanism. In the case that there is a coordinating mechanism, it may not be working well. In Zambia for example, there are public health managers that should fulfil this role, but they are also responsible for other diseases. Also, South Africa indicated a lack of (suitable) capacity at lower levels to conduct joint coordination. Kenya highlighted that it is actually more important for implementation to have these coordination mechanisms in place at the lower levels. Both Kenya and Zambia indicated that partner support is needed for the coordination at lower levels. Previously Zambia had HIV/TB focal points, but these were discontinued due to lack of funding.
- Tanzania indicated that they had a functional mechanism in place at regional level. However, there are separate TB and HIV coordinators that, like in other countries, come together as they fall under the regional health management teams. Furthermore, there are facility information exchange meetings at the lowest level. In Uganda, there are TB/HIV coordinators available at regional and district level. Ghana has some TB coordinators that also act as HIV coordinators at these levels, while Indonesia has joint coordinators at provincial level, with only one staff member dealing with TB and HIV at district level. In Lesotho, there are TB/HIV TWGs at sub-national level.

Key finding 2 - Program reviews and analyses: Comprehensive joint program reviews—which in general include an epidemiological analysis and a gap analysis—have been conducted in only five countries.

- Only five countries (Eswatini, Mozambique, Nigeria, Malawi, and South Africa) have conducted comprehensive⁵ joint program reviews in the past. The other countries have either conducted separate reviews, reviews of only one of the two programs, or have not conducted any comprehensive reviews recently.
- Epidemiological analyses are, in general, included in the program reviews and thus responses are in line with the above, with the exception of the program reviews in

⁵ The term comprehensive program reviews refer here to extensive reviews of the whole program (conducted annually, mid-term or end-term), rather than review of only some discrete components as is in general done during e.g. quarterly review meetings.

Mozambique and Nigeria where the epidemiology assessments were conducted separately. In Ghana, a joint mortality study for HIV/AIDS, TB and malaria has been conducted. However, all countries indicated that they had access to information on HIV prevalence among TB patients and TB prevalence among PLHIV based on routine data and/or, in some cases, survey data.

- Gap analyses are also conducted as part of program reviews. However, Eswatini has not yet conducted a proper gap analysis, in Nigeria the programs conducted it separately, and in Zambia, where no joint program review has been conducted, a gap analysis has been conducted for TB, HIV and TB/HIV integration. In South Africa, the gap analysis was conducted separately from the earlier program review. Separate teams for HIV and TB then shared information with a technical team of combined experts from the two programs who completed the actual analysis.
- In Ukraine, there is currently a law proposed for a joint TB/HIV program. Once this law is accepted, joint program reviews, epidemiological analyses, and gaps analyses will be conducted.

Key finding 3 - Joint TB and HIV application writing: In general, the joint TB and HIV application is considered relevant and joint TB and HIV application writing is mostly done jointly by both HIV and TB programs.

- All countries, except one, indicated that they considered the joint TB and HIV application relevant in their country context. In general, countries mention the high co-infection rate as an important reason to have a joint TB and HIV application. Related to that, many services overlap and thus integration is important— especially at the operational level. Integration increases efficiency of the service implementation due to joint planning and use of the same resources. Both Eswatini and Tanzania, specifically, acknowledged that the joint TB and HIV application assisted a great deal with actual implementation of the existing plans they had for integration. Thailand highlighted the importance of both programs discussing common interventions. In Ghana, the joint application facilitated a harmonized approach for cross-cutting issues. Kenya also indicated that the HIV and TB program have different approaches, but that the joint TB and HIV application made it possible for both programs to see how each group planned and implemented activities, thereby improving their understanding of each other. They do, however, suggest a separate budget for all integrated services that can be accessed by both programs. Malawi indicated that because the HIV budget is used for integrated activities, some of the HIV priorities are left without funding. They therefore suggested that this could be addressed through (larger) separate budgets for all integrated activities. In Nigeria, however, resistance to collaboration from both the HIV and TB departments was noted.

In Mozambique, the main concern is that the HIV program is much larger than the TB program and that it is difficult to engage the TB program. As a result, the HIV program takes its own responsibility for co-infected PLHIV.

Despite the fact that Ukraine did not have the requirement to submit a joint TB and HIV application, the country still found it applicable for a number of reasons, including: 1) the creation of the Ukraine Center of Disease Control, which combines the National TB and HIV Centers and the Public Health Center responsible for both TB and HIV at primary care level; 2) at political level, the responsibility for TB/HIV shifted from the Deputy Minister of Health to the Vice Prime Minister (head of CCM); and finally 3) in NFM 2, funding changed from non-governmental to governmental.

- Almost all countries, except four, indicated that the joint TB and HIV application was written jointly. In these cases, the writing would include a team of representatives from both

departments working on different sections. Malawi and Indonesia specifically indicated that both programs came up with their own priorities, but where it related to TB/HIV related issues, these were discussed together to make a plan. South Africa indicated that having a joint NSP helped as it set the scene for collaboration.

Ghana, Mozambique, Nigeria and Zambia indicated the joint TB and HIV application was written separately by both the HIV and TB programs (consultants) and the different pieces were only combined together in the actual application.

- Implementation of joint TB and HIV programming

Key finding 4 - Harmonization of policy and program management: In 6 of the 17 countries, policy or structural changes were needed in order to accommodate the joint TB and HIV application implementation. Although most countries have separate service provision guidance for TB and HIV, it does, however, cover co-infection. Therefore, there is a conducive environment. Program management to execute policies and plans for TB and HIV is in general effective.

- In the majority of countries (except Ghana, Malawi, Zimbabwe, Indonesia, Ukraine, and Haiti), no changes in terms of policy or structural changes were specifically made to accommodate the joint TB and HIV application. What was proposed fit the existing policies and service structures (with already a certain level of TB/HIV integration – due to a general acknowledgement of the need to integrate). Mozambique and Ethiopia indicated that since the joint TB and HIV application still resulted in separate grants for the HIV and TB programs within the Ministry of Health, no changes were needed. One country specifically indicated that the joint TB and HIV application was largely a Global Fund requirement. Thailand indicated that—not specifically related to the joint TB and HIV application—the TB and HIV programs were first joined, but later separated again as that was thought to work better (especially for TB, due to having many TB patients without HIV). In Nigeria, it was suggested, however, that changes should be made, including the development of a joint NSP and integration of the programs at directorate level.

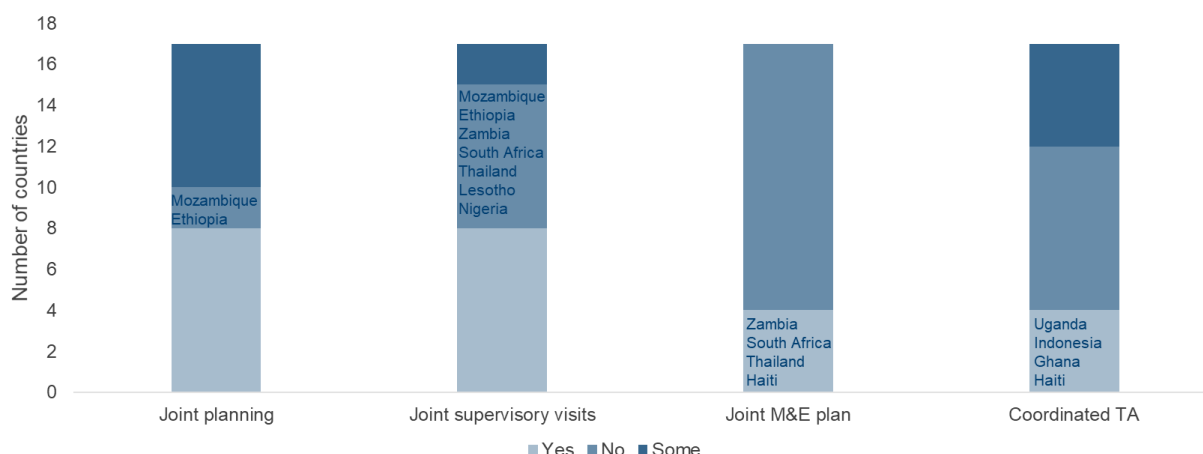
In Ghana, a single grant account was created. In Malawi, an IPT policy was developed in order to accommodate the joint TB and HIV application implementation and in Indonesia the HIV program had to be granted access to GeneXpert. In Zimbabwe, an integrated approach to supervision, joint program review, and mentoring was developed. In Ukraine, the joint TB and HIV application concept was in line with the structural changes already taking place, but on policy and legal levels, the reform is ongoing with the already discussed newly proposed law. In Haiti, policies to ensure TB/HIV collaboration required further specifications.

- Only five countries (Eswatini, Ghana, Thailand, Indonesia and Ukraine) indicated the availability of program guidance (treatment guidelines) that cover both HIV and TB (although these are not followed in Thailand and need revising). All other countries have separate guidelines that cover co-infection. Although South Africa has an integrated NSP, it was indicated that there is insufficient policy and program guidance.
- All countries except South Africa and Thailand indicated that they had effective program management to execute policies and program guidance (either separate in both the TB and HIV program, or due to the already discussed coordination mechanism in both programs, e.g. TB/HIV focal persons). South Africa indicated that integrated program management is currently variable and therefore not always adequate. Thailand indicated that due to the programs being separate at all levels, except for the CCM, program management for TB/HIV is not very effective. Although effective, Lesotho indicated that program management is under resourced.

Key finding 5 - Programmatic integration: In terms of programmatic integration, just less than half of the countries have joint planning and joint supervisory visits. Only about a quarter have joint M&E plans and coordinated TA. (see Figure 12)

- In terms of joint planning to integrate the delivery of TB and HIV services, only 8 countries (Ghana, Lesotho, Malawi, Tanzania, Uganda, Zimbabwe, Indonesia and Haiti) indicated that they had proper joint planning. Ethiopia and Mozambique indicated that each program conducts their own planning, even for TB/HIV activities. The remainder of the countries indicated that programs conduct their own planning, but do invite/inform the other program when these plans are discussed.
- Supervisory visits from the national programs to the lower levels (regions, provinces, districts) to assess the implementation of the planned integrated services is done jointly in 8 countries. Indonesia and Ukraine indicated that some visits are done jointly, others separately, depending on, for example, staff availability. Ethiopia, Lesotho, Mozambique, Nigeria, Zambia, South Africa, and Thailand indicated that visits are done separately. However, Mozambique, Ethiopia and Thailand both indicated that TB/HIV integrated services are assessed by the HIV program during these visits and, in Thailand, also during the TB program visits. In Zambia, integration from the visits is donor dependent; in the past funding was available for these and they were conducted jointly, but that is not the case currently. In South Africa, the programs have the same Deputy Director General, but there is no close working relationship between the programs and supervisory visits to the provinces are conducted separately.
- Almost all countries, except 4 (Zambia, South Africa, Thailand and Haiti), have a separate monitoring and evaluation plan for TB/HIV activities. In general, the HIV program monitors those service indicators related to that program (e.g., % of PLHIV screened for TB; % of PLHIV diagnosed with active TB; % PLHIV receiving IPT) and the TB program monitors those related to among TB patients (e.g., % of TB patients tested / tested positive for HIV, % of TB patients with HIV initiated on ART). In Zambia, there is a joint M&E framework within the Ministry of Health that includes all health indicators (i.e., including TB/HIV indicators). South Africa also has a joint NSP, including a joint M&E plan. In Thailand, there is a team at national level specifically focused on the TB/HIV indicators. In Haiti, a joint M&E plan was recently reviewed related to the NSPs for HIV and TB. Eswatini indicated that a joint M&E plan is currently under discussion. Ukraine indicated that a joint planning and M&E plan will be in place once the unified strategy has been adopted.
- In terms of technical assistance for HIV and TB, only 4 countries indicated that they had coordinated TA. In Uganda, there is a TA agreement within the Ministry of Health that coordinates support for TB and HIV together; in Indonesia this is coordinated in a workshop; and in Ghana and Haiti, coordination happens via the UN structures. Five countries (Eswatini, Mozambique, Zambia, Tanzania, and Ukraine) indicated that some of the TA is separate, while some is joint depending on what activity the TA is for, but also depending on the donor. The remaining countries indicated that TA is separate for both programs.

Figure 12. Programmatic integration in 17 countries



Key finding 6 - Alignment of critical components of the health system: Most countries use one health information system (HIS) for HIV and TB data or this is under development. Most countries also use the same laboratory and diagnostic services and one procurement and supply chain management system for HIV and TB. In general TB and HIV health work force at facility level is trained on the basic cross-cutting issues. Joint financing is largely still donor dependent.

- Most countries, except Kenya, Mozambique and Nigeria, use one HIS for HIV and TB data or this is under development. For countries that use one system, this is usually the District Health Information Software/System (DHIS2) or a similar national HIS. However, it is not always possible to link patients that present with TB/HIV coinfection in both databases. Although Malawi uses two different systems, part of the HIV data is also included in the DHIS. Indonesia has started integrating the two separate systems into the DHIS and also, in Ukraine and Haiti, an integrated system is under development. In Eswatini, information on key populations is also included in the HIS, while Zambia and South Africa indicate that information on key populations is separate. South Africa highlights that the lack of a unique identifier causes problems in identifying people who move across health service delivery points. Thailand also highlights the risk of duplicate data when using separate systems.
- All countries, except Kenya, Nigeria and Haiti, use the same laboratory and diagnostic services for HIV and TB. Tanzania is still in the pilot phase as it only recently started using GeneXpert for viral load testing and early infant diagnosis (EID). Malawi also indicated that further scale-up is needed in terms of integrated use of GeneXpert. In South Africa, the national laboratory system also has not fully instituted a unique identifier.
- Most countries have one procurement and supply chain management system for HIV and TB. Malawi and Zimbabwe, however, indicated that the HIV and TB program do their own procurement. In South Africa, the same system is used at provincial level, but nationally the system is not yet fully integrated. In Tanzania, there is a joint electronic logistic management information system and there are joint IPT quantification review meetings in both Tanzania and Zambia. When using a joint system, antiretrovirals are generally procured with the HIV program budget, while anti-TB treatment is procured with the TB budget and IPT is either bought by the HIV or TB budget.
- In general, the TB and HIV health workforce at facility level is trained on the basic cross-cutting issues (HIV testing and TB screening/diagnosis), although actual training might be separate. However, when it comes to treatment initiation training, HIV staff are usually

trained on ART initiation, while TB staff are usually trained on TB treatment initiation. Only Eswatini, Uganda, and Indonesia indicated that they have one curriculum and joint training sessions. Eswatini clearly indicated that nurses can do both ART and TB treatment initiation; in Ethiopia this is also the case in smaller facilities, but this is due to shortage of staff. South Africa and Ghana also have substantial task shifting/sharing. Furthermore, Zambia and Kenya indicated that at higher levels of care, separate training takes place and in Thailand there is specific HIV and TB staff at higher levels of care.

- Joint financing is largely still donor dependent. In NFM 2, 8 countries have joint Global Fund grants only (Eswatini, Lesotho, Malawi, South Africa, Zambia, Thailand, Ukraine, Haiti); 3 have disease specific grants only (Ethiopia, Kenya, Zimbabwe, Indonesia); and 5 (Ghana, Mozambique, Nigeria Tanzania and Uganda) have both joint and disease specific grants, but the grants within the Ministries are disease specific (except for Ghana). Thailand does indicate, however, that joint funding is split in practice before making it available to the programs.

It is indicated that most PEPFAR grants are only supporting HIV, although Eswatini indicated that joint funding is received, and Uganda said the push for integration seemed to be acknowledged by PEPFAR and other funders. Ghana indicated that there is an effective dialogue among funders regarding integrated funding. Lesotho indicated that the type of funding (separate or joint) also depends on the type of project, in addition to the funder.

Zambia and Tanzania indicated that they want to push for integration, but Zambia indicated that since some donors fund disease specific activities, established integrated structures sometimes revert back to separate or siloed. South Africa indicated that funding from external donors is not fully co-ordinated in-country, but also that donors do not always take into account what the stakeholders would like.

Key finding 7 - Integrated TB and HIV service delivery: In general, there is a high level of partly integrated service delivery and the majority of countries indicate that the quality increased and that integrated services are more sustainable.

- Most countries still have HIV clinics and TB clinics (although these can be within the same facility) that provide HIV testing and TB screening/diagnosis, but refer for treatment to the respective clinic. Only Eswatini had a one-stop service whereby TB and HIV services are provided by the same staff in the same clinic. In Zambia, HIV clinics provide all TB services and TB clinics provide all HIV services, so in practice these are also one-stop services.

For those with partial integration, there are also differences, for example:

- In Mozambique the TB clinic offers all HIV services, but the HIV clinic refers to the TB clinic for treatment.
- In Kenya, the HIV clinic offers all TB services, but HIV positive TB patients are referred for ART from the TB clinic to the HIV clinic.
- Ghana, Nigeria, Tanzania, Uganda, Zimbabwe and Haiti currently have mostly partially integrated TB and HIV services, but in some places, there are one-stop services available.
- In South Africa, fully integrated one-stop services are seldom available.
- In Thailand, there are health promoting hospitals without beds in which HIV testing and TB screening/diagnosis is conducted and referral takes place for treatment to higher levels of care. There are also small hospitals where the complete services are integrated and larger hospitals where, again, HIV testing and TB

screening/diagnosis is conducted in both HIV and TB departments, but referral is made to the respective department for treatment.

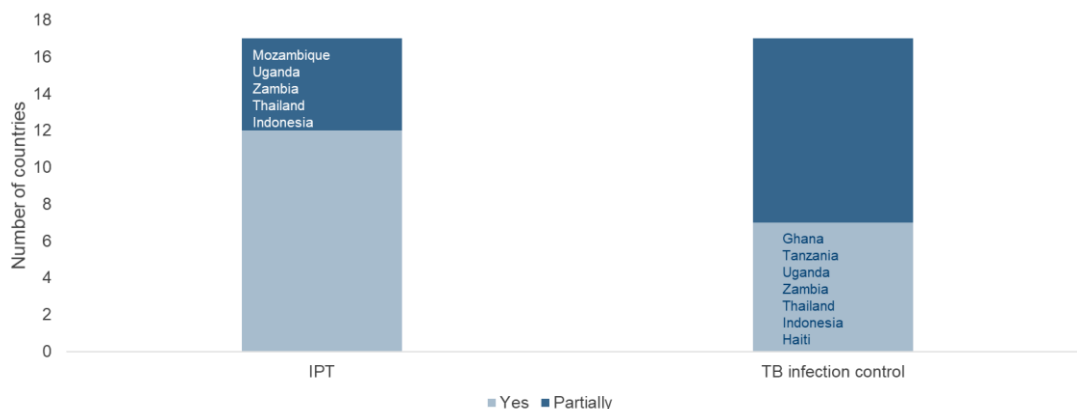
- In Indonesia, TB clinics offer the first HIV test, but referral is made for a confirmatory test and treatment; PLHIV are generally treated in hospitals where they can also receive all TB services.
- In Ukraine, referral is needed for treatment, whereby regional HIV centers can also provide TB treatment and vice versa, but this is not integrated at lower level centers.
- The majority, except 4 countries (Mozambique, Kenya, Ethiopia, Thailand), indicated that due to the joint TB and HIV application, the quality of the integrated HIV/TB services increased. The countries that indicated this not be the case said that due to disease specific grants (or splitting of the grant after it has been received like in Thailand), integration only takes place up to a certain level within each of the programs, and thus the quality of service provision stayed the same. Countries that felt that quality increased related this to increased detection of patients with co-infection and better service provision for the patients (e.g. due to training, supervision, program review). Haiti indicated that integration of HIV and TB services was easier than integration of other services like family planning and maternal and child health.
- The impact of the joint TB and HIV application on sustainability of the integrated services was in line with the above. South Africa highlighted that for sustainability it is important that local implementing partners are sufficiently involved and receive funding. Furthermore, sustainability was attributed to better use of limited human resources (less people needed as they can do joint service provision), efficient use of the infrastructure, and funding availability for joint activities (e.g. training, supervision). Uganda indicated that joint service provision is becoming more of a routine and Haiti indicated that integration is a continuous process.

Key finding 8 - Reducing the burden of TB in people living with HIV: In order to reduce the burden of TB in people living with HIV, all countries offer TB screening, anti-TB treatment for PLHIV, and initiate early ART. IPT initiation is problematic in a third of the countries. TB infection control is not optimal in almost half of the countries, besides the TB clinic (see Figure 13).

- All countries have invested in intensified TB case-finding and ensuring high quality anti-TB treatment. However, most countries specifically mention that this is the responsibility of the TB programme. However, all countries do indicate that they offer TB screening among PLHIV.
- In 5 countries (Mozambique, Uganda, Zambia, Thailand and Indonesia), initiation of TB prevention with IPT for PLHIV is problematic. In Ghana, IPT is provided in selected facilities only and in Uganda and Zambia drug availability is an issue. In Thailand, IPT is recommended but poorly implemented whereas in Indonesia it is provided in primary health care, but not always in hospitals. At least 2 countries cited lack of health care workers buy in for providing IPT as a major challenge for IPT implementation. The lack of health care workers' engagement is attributed to their perception that IPT could lead to the development of resistance to isoniazid. One country has plans to develop an education package for health care workers. In Zambia, an implementation plan has recently been developed to improve IPT provision. In the other countries, IPT is in place. All countries have a universal test and treat policy for early ART initiation among HIV-positives.
- Ensuring control of TB infection in health-care facilities is done extensively in Ghana, Nigeria (recent large investment), Tanzania, Uganda, Zambia, Thailand, Indonesia and Haiti throughout the health care system (Uganda about three quarters of the facilities). In most countries TB infection control is done in large hospitals, but is still sub-optimal in other

sites, although the appropriate policies are in place. This is attributed to the fact that most of the health facilities were built with no TB infection control in mind. All other countries have some level of quality control, more focussing on the TB clinics, or in urban areas (Zambia, Ethiopia). In Tanzania, TB patients with HIV referred to the HIV clinic for ART have separate clinic appointments to minimize contact with other PLHIV.

Figure 13. Activities to reduce the burden of TB in people living with HIV in 17 countries



- All countries provide HIV testing and counselling to TB patients (in Ghana limited coverage), and for those that test positive, ART is provided (either in the same clinic or elsewhere, depending on the integration of the TB/HIV services), although linkage might not be 100% (South Africa). In Indonesia, only the rapid tests are conducted in TB clinics, and referral to a hospital is needed for confirmatory tests.
- However, for those with an unknown HIV status or those that test negative, prevention interventions are not provided everywhere. In Malawi, no HIV prevention services are provided in TB clinics, in Ghana and Nigeria they are limited, and in South Africa it is not clear what is provided in these clinics and referrals are not tracked. In Mozambique and Kenya, condoms are available, but no referrals are made to prevention services. In Indonesia, condoms are available throughout the system but TB patients are not actively provided with any HIV prevention services. In the remaining countries, condoms are available and HIV prevention referrals are part of the post-test counselling.
- Provision of Co-trimoxazole preventive therapy for TB patients living with HIV is provided in all countries (Ghana partially). In Ukraine, however, this is not procured centrally and depends on funding from the facilities or donors.

Key finding 9 - Community systems strengthening: Integration of TB and HIV services at community level is more limited compared to facility level.

Only four countries (Malawi, Tanzania, Uganda and Haiti) indicated that those working in the communities provide both HIV testing as well as TB screening (whether they are trained / funded by HIV or TB). Three countries indicate that it is totally separate: Eswatini has voluntary medical male circumcision (VMMC) and key population programs in the community for HIV and case finding programs for TB; in Zambia, HIV testing and TB screening is done separately in the community; and in Ethiopia only HIV testing is done. In the remaining countries, there is some level of integration. For example, there is integration of TB in HIV activities but limited the other way around (South Africa, Zimbabwe, Indonesia, Ukraine) and there is integration, but the activities are not coordinated (Kenya).

Key finding 10 - Key populations engagement: In general, key populations are involved at the national level, but less integration is seen at the service provision level.

For the joint TB and HIV application development and national level coordination mechanisms, key populations are in general involved (mentioned specifically by Malawi, Tanzania, Uganda, South Africa, Indonesia and Ukraine), although Mozambique indicated that there are separate working groups for HIV and TB key populations.

Service provision is less integrated due to key populations that differ between the two programs (except e.g. prisoners, as mentioned by Zambia). Although in Kenya, a service package has been developed for health care workers to attend to both TB and HIV for key populations. In Thailand, they are planning to integrate community services for people who inject drugs (PWID).

In addition, South Africa has developed a human rights strategy, but gender equity focus is not very good currently.

4.5 Overall best practices, challenges, and solutions

General recommendations for national stakeholders are included in the best practices and solutions below. The text combines written input received before the workshop, as well as information from presentations and (group) discussions held during the workshop in Kigali from a total of 17 countries. As a result, the mentioned best practices, challenges, solutions, and recommendations are not linked to any specific country. Furthermore, although the aim of the report is to highlight issues related to the implementation of the joint TB and HIV application, countries have discussed issues related to TB/HIV integration in general.

Best practices of the joint TB and HIV application implementation

Note that many of the issues discussed during the interviews with the TB/HIV managers were repeated by countries as best practices. Therefore, the issues highlighted here represent more specific and detailed examples of best practices not mentioned before. The following best practices were mentioned:

Process and steps in joint TB and HIV programming and development of the joint TB and HIV application:

- When feasible, both the TB and HIV programs should be incorporated under a common directorate, with one director.
- A clear and comprehensive list of stakeholders (Ministry of Health, other ministries, donors, implementing partners, civil society, key affected populations, experts, universities) that will contribute in the joint TB and HIV application should be available before the country consultations are conducted.
- All identified stakeholders should be given the needed space and opportunity to contribute to the writing/grant making process. This facilitates the rapid implementation of the grant at a later stage.
- Countries should conduct a joint program review of the TB and HIV programs.
- The gap analysis should be done jointly and then the tasks should be divided.
- The investment case should be done jointly to improve resource allocation.
- A CCM subcommittee should lead the process on behalf of the CCM.
- The writing team should have a lead and support writer to consolidate discussions and inputs during the national consultations and conduct the write-up according to the Global Fund requirements.
- Sufficient TA should be available for the joint TB and HIV application writing/grant making process.
- A good costing team is needed to translate the narrative into budgets.
- Interventions for both TB and HIV should be prioritized based on current scientific evidence on impact and cost.
- Prime Recipients (PRs) and sub-recipients (SRs) should be well informed on the Global Fund procedures and processes.

- A joint TB and HIV application facilitates the re-allocation of funds within and between the two programs; cost-sharing/co-funding for commodities, interventions.
- Merged financial accounts facilitate the management of the grant.

Harmonization of policy and program management:

- When feasible a single, costed NSP is preferred. If not possible, each individual NSP should incorporate TB/HIV activities.
- Countries should develop: a) a TB preventative treatment (TPT) acceleration plan and update relevant TPT standard operation procedures and guidelines; b) a national plan and operational guide to find the missing TB cases; c) TB/HIV job aids; and d) a guideline and manual on the finalized and approved sample transport and referencing system. The TB LAM test should be included in both the TB and HIV national guidelines to assist in the diagnosis of TB in patients with advanced HIV disease.
- Local stakeholders should be engaged during supervisory visits.
- Results of TB/HIV activities should be reviewed regularly.

Monitoring and evaluation:

- Tools that capture essential TB/HIV indicators should be harmonized.
- An electronic health record with modules for TB and HIV should be in place.
- Registers should be set up for IPT, GeneXpert, and TB LAM.
- TB/HIV data should be included in the DHIS2 (or a similar system).
- A joint M&E plan should be created (e.g., linked to a joint NSP).
- Continuous on-site monitoring of activities is necessary and allows for reprogramming.
- Data cleaning, validation, and analysis should be done jointly
- Quarterly and annual data review meetings should be conducted jointly.

Alignment of critical components of the health system

- Integrated training on TB and HIV should be provided in medical and nursing schools.
- Support of the GeneXpert platform should be provided by both programs; integrated use of GeneXpert – TB, viral load, EID, Human Papillomavirus.
- The same transportation system for specimen collection (and result delivery) should be used by both programs (e.g. scheduled and on-call; use local transport e.g. motorbikes).
- Remuneration/salaries should be harmonized across all the Global Fund supported programs (benchmarking).

Integrated TB and HIV service delivery:

- Cough officers (TB screening clerks) should be used for screening PLHIV at every encounter with a health facility and cough triage (screening and separation of those that screen positive) should be conducted for those attending the health facility.
- Lay counsellors should be used to create demand for TPT among PLHIV (e.g., TPT part of the education package provided to patients).
- Screening for TB and use of TPT in eligible patients should be improved by sorting and colour coding of files in the health facility of patients screened for TB, not having active TB, but not initiated on TPT for easy identification by healthcare workers.
- Facilities should be renovated to accommodate TB infection control (e.g., setting up one-stop services).
- Patient support groups that integrate both TB and HIV activities should be established.
- Joint TPT forecasting and procurement—using guidelines and electronic tools—should be done.
- The resources of each disease (e.g. purchase of GeneXpert, TPT) should be leveraged.
- Regular meetings should be conducted whereby facility staff meet to discuss integration issues.

- A central distribution warehouse delivering chronic medication to an accessible point of collection for the patient should be utilized.

Community systems strengthening:

- TB community systems should be aligned to existing HIV systems.
- TB, HIV, and non-communicable diseases should be integrated into community activities.
- One social and behaviour change communication program should be developed for both diseases.

Operational and implementation research:

- Joint operational and/or implementation research should be conducted to support the implementation and effectiveness of integrated TB/HIV programs (e.g. identification of feasible strategies to link peripheral settings to laboratory services; assessment of TPT among PLHIV; documentation of different integration models used).

4.6 Country-specific experiences and best practices

South Africa: Joint investment case

What was the challenge?

South Africa has the largest HIV epidemic in the world, accounting for 19% of the total number of people living with HIV globally. It has the largest antiretroviral treatment program in the world⁶ and is also among the 30 high burden countries for TB and for TB/HIV.⁷ As such, it has the need to maximize the impact of investments in HIV and TB programs and to ensure their sustainability.

What actions were taken?

In 2016, a joint investment case for HIV and TB was developed. The investment case was the first exercise in South Africa that compared all known HIV and TB interventions at the same time and calculated their impact on both HIV and TB across all layers of the population.

A consultative and inclusive process was followed with all TB and HIV stakeholders – with strong inclusion criteria of civil society.

It took 2 years to review the evidence, make calculations, and create the relevant scenarios.

What were the results?

The investment case indicated that there was a need to continue with a heavy investment in HIV and showed that response to TB needs had to be significantly scaled up. The testing and treatment initiation for HIV to 90% can bring HIV incidence down significantly. Although starting ART will help to bring down the TB incidence, an additional scale up of screening, testing, and treatment success for TB to 90% is required in order to massively reduce TB deaths and halve the number of TB cases. For both HIV and TB, scaling up the response means after 5 years for TB, and after 10 to 15 years for HIV, the prevention efforts will show their results and the funding needs will decrease as there will be will less people that require expensive treatment.

What was learned?

The joint investment case gave clear directions on the priority areas for investment and the efforts that should be ramped up. A joint investment case is feasible and requires political will, involvement of all relevant stakeholders (including civil society), and technical knowledge.

The investment case also informed the development of a clear national plan (NSP 2017-2022) for ending the HIV and TB epidemics through identification of the most cost-effective mix of interventions to address HIV and TB over a 20-year period.

⁶ UNAIDS Country Report, 2019.

⁷ WHO Global Tuberculosis Report, 2018.

Malawi: Joint HIV, TB, PMTCT and Hepatitis Program Review - 2019

What was the challenge?

Malawi has one of the highest HIV prevalence rates in the world (9.6% in 2018) with 1,000,000 people living with HIV.⁸ It is also among the 30 high burden countries for TB/HIV, with 49% of TB patients having a known HIV positive status.⁹ There is limited information on population prevalence of viral hepatitis.

In order to assess the performance of the programs and to provide recommendations for improvement, as well as to inform the next strategic plans, there is a need to regularly conduct program reviews.

What actions were taken?

A decision was made by the Malawi Ministry of Health to conduct the first Malawi Joint HIV, TB, PMTCT and Hepatitis Program Review. The aim of this joint review was to improve program integration, decrease the interruption of regular program activities during the program reviews (especially at facility level which could negatively impact patients care), and reduce costs. It also aimed to enhance program transparency and accountability.

The first Malawi Joint HIV, TB, PMTCT and Hepatitis Program Review took place between 17 and 28 of June 2019.

A multidisciplinary team of members of the Ministry of Health, local partners, members of civil society and national and international experts was assembled. A desk review was the first step of the program review, followed by consultative meetings (pre- and post-field visits), field visits, debriefing discussions, and dissemination of results.

What were the results?

The joint program review was successful despite some limitations, including an inability to conduct talks with some of the key stakeholders at national and subnational and delays in documentation retrieval, which resulted in inadequate verification and quantification of data and unavailable data at the local level. The above-mentioned limitations didn't significantly affect the main findings and recommendations of the review.

What was learned?

A joint program review can be organized and conducted without major setbacks.

The main recommendations are currently being collected into a report. The recommendations will include areas for improvement in service delivery, as well as areas to consider in the next strategic plan(s), taking into consideration the national and international guidelines.

Tanzania: Coordination of TB/HIV services

What was the challenge?

Tanzania has an HIV prevalence of 4.6%, with an estimated 1,600,000 people living with HIV, and it is also among the 30 high TB and TB/HIV burden countries.^{10,11}

What actions were taken?

Recognizing the burden of TB/HIV in Tanzania, steps were taken to address this in a comprehensive manner—including governance, policy, and programmatic aspects

⁸ UNAIDS Malawi Factsheets, 2018.

⁹ WHO Global Tuberculosis Report, 2018.

¹⁰ UNAIDS. Country Factsheets. United Republic of Tanzania, 2018//

¹¹ WHO. Global Tuberculosis Report, 2018

Coordination:

- A National TB/HIV Policy has been in place since 2010 and was updated in 2018 to reflect new WHO guidelines.
- Strong collaboration exists between the National AIDS Control Program (NACP) and the National Tuberculosis and Leprosy Program (NTLP), both of which are under the same MoH Directorate of Preventive Services.
- The joint TB and HIV application was developed by one proposal development task force and writing team with the involvement of other relevant stakeholders, which promoted ownership.
- The joint planning of interventions and target setting was an important part of the joint TB and HIV application development process.
- Routine coordination meetings are in place aimed at achieving the National TB/HIV collaborative activities targets. These include a TB/HIV technical working group, INH quantification review meetings, and health facility information exchange meetings.
- TB/HIV interventions are co-funded: GeneXpert machines and supplies are funded by both programs; National and Regional TB/HIV coordinating committee meetings are supported by the NACP; District TB/HIV committees are supported by NTLP; INH is funded through NACP however the procurement process is under NTLP and health facility information exchange meetings are funded under the HIV Grant.

Monitoring and evaluation:

- Supportive supervision and mentoring visits to health facilities on TB/HIV services are conducted jointly.
- The district TB/HIV officer coordinates TB/HIV interventions at district level (this role is now streamlined into the government payroll).
- Robust NTLP and NACP hybrid M&E systems are aligned to the DHIS 2.

Procurement and supply chain management:

- As stated above, INH quantification review meetings are jointly run and GeneXpert machines and supplies are funded by both programs. Also, the electronic logistic management information system (eLMIS) covers both TB and HIV and the storage and distribution of supplies is integrated through the Medical Stores Department.

What difficulties were encountered?

Although the joint TB and HIV application was prepared jointly by both programs, at the time of grant making the joint TB and HIV application was split into 2 separate grants. Implementation arrangements have also been challenging because even in the same grant there are different geographical coverage for TB and HIV interventions for both PR1 and PR2. Finally, the implementation pace of TB/HIV activities are different in each grant, with different disbursement rates and burn rates.

What was learned?

A joint TB and HIV application can act as a catalyst for the integration of TB-HIV activities in countries with high TB and HIV epidemics.

TB and HIV collaboration can work when effectively programmed (quarterly joint TB & HIV/AIDS program planning and review meetings, as well as procurement and supply chain management).

Involvement of all stakeholders from the beginning of the joint TB and HIV application development to the grant making and implementation can significantly influence grant performance.

Joint coordination reduces the risk of the TB and HIV programs working in silos, the effect of which is duplication of efforts and the inefficient use of limited resources (i.e., integrated specimen referral, integrated multi disease platforms, GeneXpert).

Mozambique: One-stop-shop for TB/HIV co-infected patients in TB clinics

What was the challenge?

Mozambique is battling a dual epidemic of HIV and TB. With a high HIV prevalence rate (12 %) among the 15-49 age group, it is estimated that in 2018, 150,000 new HIV infections occurred. It is also among the 30 high burden countries with TB, MDR-TB and TB/HIV, with an estimated 66,000 incident TB cases among PLHIV in 2017.^{12,13}

What actions were taken?

In order to better address the needs of TB/HIV coinfected patients and to reduce their mortality, Mozambique implemented a differentiated service delivery model for TB/HIV patients: a one-stop-shop model.

Under this model, the TB clinic provides HIV counselling and testing to all TB patients and also TB and HIV treatment to all TB/HIV coinfected patients. HIV patients diagnosed with TB in the HIV clinic are transferred to the TB clinic to receive both TB and HIV treatment. Preferably the TB/HIV coinfected patients will also receive both treatments with the same health care worker, thus reducing waiting time.

The patient initiates ARV treatment following the national guidelines, while counselling and adherence support for both diseases is provided in the TB clinic. Both antiretrovirals and anti-tuberculosis drugs are dispensed in the TB clinic. Since the patients don't need to go to the pharmacy, this reduces waiting time and minimizes TB infection risks. Whenever possible, all sample collections (for both monitoring of TB and HIV treatment) are made at the TB clinic so that the patient doesn't need to go to the laboratory.

Once the TB treatment is completed, the patient is referred to the HIV clinic to continue with its ART.

What were the results?

Mozambique has been very successful with the one-stop-shop implementation. In 2018, 97.8% of all TB patients were tested for HIV and 96.7% of TB/HIV coinfected patients were receiving antiretroviral treatment¹⁴.

Treatment outcomes for new and relapse HIV-positive TB cases in 2016 presented a high treatment success, reaching 87%, which is ten points higher than the global average of 77%¹⁵.

What was learned?

One stop shop implementation in TB clinics is feasible in high TB/HIV burden countries and presents good results in TB/HIV indicators as well as in tuberculosis treatment outcomes.

Eswatini: Use of TB LAM for the diagnosis of TB in PLHIV with advanced disease

What was the challenge?

The Kingdom of Eswatini presents a high burden of both HIV and TB. It has an HIV prevalence of 27.0%¹⁶ among adults aged 15 years and over and a TB prevalence of 308 per 100 000 population. Eswatini is also among the 30 high TB/HIV burden countries^{17,18} and had a TB/HIV co-infection rate of 66% as of December 2018.¹⁹ Though TB-related mortality among HIV+ patients decreased from 84/100 000 in 2017, Eswatini still reported high mortality rates, at 44 per 100 000 population in 2018. Despite recent success in achieving the 90-90-90 targets, 15% of people still

¹² UNAIDS. Data 2019

¹³ WHO. Global Tuberculosis Report, 2018

¹⁴ WHO. Country Data, 2018

¹⁵ WHO. Global Tuberculosis Report, 2018

¹⁶ Swaziland HIV Incidence Measurement Survey 2: A population-based HIV impact Assessment (SHIMS 2 2017).

¹⁷ Global AIDS Update 2019. UNAIDS.

¹⁸ Global TB Report 2018. WHO.

¹⁹ Annual TB Program Report Eswatini, 2018.

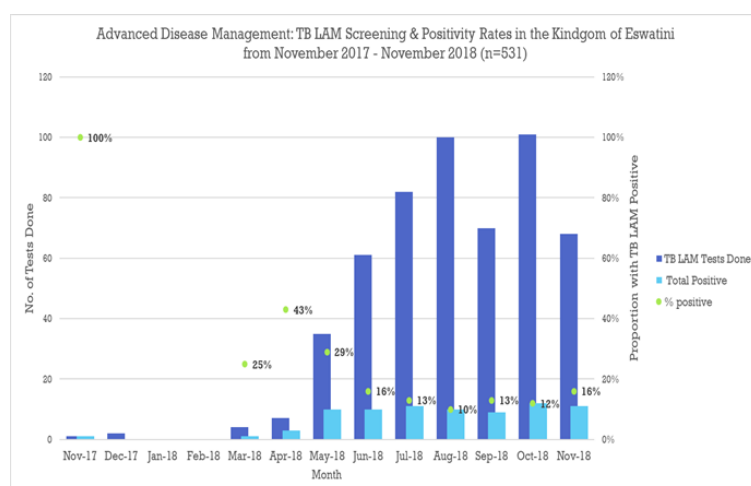
present with advanced HIV at the time of diagnosis (CD4 cell count < 200 cells/mm³) and thus are at higher risk of contracting TB²⁰ and of dying of undiagnosed TB.

What actions were taken?

Eswatini implemented an advanced HIV disease package of care that included (among other interventions) the use of TB LAM for early detection/diagnosis of TB in PLHIV presenting with advanced HIV disease. The use of TB LAM was included in both the TB and HIV management guidelines. Recording and reporting tools were developed and disseminated to health care facilities. An algorithm for evaluating TB in persons with advanced HIV disease was developed. In adults and adolescents living with HIV, TB LAM is used for the diagnosis of TB in those presenting with CD4 count ≤ 100 cell/mm³ and signs and symptoms of TB. In all children under the age of 5 living with HIV, TB LAM is used for the diagnosis of TB in those presenting with signs and symptoms of TB. In children above the age of 5, TB LAM is used in those with CD4 count ≤ 100 cell/mm³ or with CD4 less than 25% who are presenting with signs and symptoms of TB. All PLHIV—including children, adolescents, and adults who are seriously ill with danger signs—are also tested with TB LAM regardless of CD4 count. The X-pert MTB/RIF test is done concurrently with the TB LAM test or as a follow up after the TB LAM test to diagnose drug resistant TB. This advanced HIV disease package has been rolled out in a first phase in 16 sites across the country (hospitals and health centers), with at least 3 sites per region. The implementation started in November 2017.

What were the results?

In the period between November 2017 and November 2018, 531 patients were tested with TB LAM, with 78 of them testing positive (i.e., a positivity rate of 15%).



What was learned?

TB LAM can be implemented in different settings and is of use to diagnose TB in PLHIV with advanced disease. This positive experience has led the government to make plans to roll out the TB LAM test to primary health care clinics starting in September 2019. Full implementation is expected by January 2020.

²⁰ Country Factsheets Eswatini. UNAIDS.

Kenya: Expansion of TB preventive therapy in Kenya

What was the challenge?

Tuberculosis remains the main cause of morbidity and mortality among PLHIV.²¹ Kenya has an HIV prevalence of 4.9% and approximately 1,500,000 PLHIV. Kenya is also among the 30 high burden countries for TB/HIV, with an estimated 18,000 TB-related deaths among PLHIV.^{22,23}

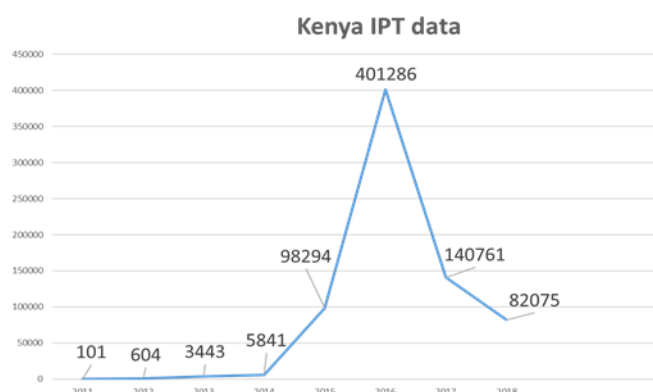
What actions were taken?

Kenya started providing IPT to PLHIV in 2011 with the formation of the TB/HIV working group and the creation of intensified case finding tools for adults and children. In 2013, political goodwill was garnered to expand the provision of IPT, which allowed for scaled-up implementation. As a result, an IPT HIV Program was launched in 2015 by the Ministry of Health, followed by the release of the National Isoniazid Preventive Therapy Standard Operating Procedure, which gave guidance to healthcare workers on implementing IPT in health care settings. A circular regarding IPT was also disseminated instructing health care workers to start IPT in eligible patients. This created a momentum that resulted in 98,298 patients starting IPT in 2015. In 2016, a 100-day national HIV Testing and Treatment Rapid Results Initiative was launched that has among its priorities increasing Isoniazid Preventive Therapy uptake among PLHIV from 50,000 to 500,000 patients, which enabled 401,286 patients to be started on IPT in 2016, followed by 140,761 in 2017.

The current recommendation for IPT use is once in a lifetime for PLHIV. Isoniazid is given alongside pyridoxine to decrease adverse events.

What were the results?

Since 2011 a total of 732,405 PLHIV started IPT in Kenya.



The peak of initiations was in 2016, following the release of the Isoniazid Preventive Therapy Standard Operating Procedure in 2015.

What was learned?

TPT can be scaled up effectively in a relatively short period of time. It requires political goodwill and a multi-sectoral approach, including participating of civil society organizations with patient-centered demand creation for TB prevention. A strong supply chain of commodities is necessary to avoid stock outs. In order to effectively identify the patients eligible for TPT there is a need to improve the quality of the TB screening and rapid diagnostic tests for TB need to be adopted. Appropriate tools for recording the intervention are necessary as well as frequent monitoring of the data. Patient education and counselling must be ensured prior to TPT initiation and monthly follow up visits have to be followed. There is a need to monitor for adverse events and to manage them promptly when they arise. Also, pharmacovigilance needs to be strengthened.

²¹ Gupta RK, Lucas SB, Fielding KL, et al. Prevalence of tuberculosis in post-mortem studies of HIV-infected adults and children in resource-limited settings: a systematic review and metaanalysis. *AIDS*. 2015; 29:1987–2002.

²² UNAIDS Kenya Country Data.

²³ Global Tuberculosis Report. WHO. 2018.

4.7 Challenges and solutions related to the joint TB and HIV application implementation

The below summarises some of the challenges encountered by countries in the implantation of the joint TB and HIV application. Please note that solutions were not always given for the challenges mentioned.

Table 6. Challenges of the joint TB and HIV application implementation and related solutions

	Challenges	Solutions
Process and steps in joint TB and HIV programming and development of a joint TB and HIV application	High burden for the joint TB and HIV application writing team.	TA to cover the complete time from joint TB and HIV application development to grant making.
	High administrative (documenting all inputs), logistical (large meetings) and financial (payment of consultants, meetings, travel and logistics) burden for country consultations.	The Global Fund needs to be clear about the minimum level of country consultations. Financial support is needed for developing the joint TB and HIV application.
	Participation and involvement of all stakeholders was not optimal; especially key populations.	
	Message of civil society diluted during writing funding request. Minimal involvement in grant making.	Increase involvement of civil societies by encouraging the funding request writing team to meet with civil societies. Also involve them during grant making.
	Slow decision making (consensus) due to country consultations and political push and pull.	
	Complex funding application procedures and tools to be completed by program officers in a short timeframe.	The Global Fund should simplify the funding application tools and extend the timeline.
	High administrative burden due to large number of SRs reduces the scope of the grant (not all regions covered).	
	Programs competing for available funds (not easy to stick to the allocation made by the CCM).	
	Shortage of funding; funding ceilings should be clear from the beginning.	Lobby and advocate for more partner support during joint TB and HIV application and grant making stages.
	Different grant agreements and disbursement releases between disease specific grants results in disjointed implementation.	Joint grant negotiation and making.
	Having one PUDR – if one program fails to submit, the whole grant performance will be delayed.	

	Delays and lack of agreement to transfer funds across grants. At grant closure some funds are returned while other grants have funding deficits.	Joint grant negotiation and making.
	Difficult to realign funds for new emerging activities due to changing priorities.	
	Programs still do not really work together (complex).	
	Issues of “ownership” of joint interventions and resulting performance.	
Harmonization of policy and program management	Different countries struggle with different aspects of joint programming: policy, planning, program reviews, supervisory visits, joint M&E.	Continued support needed for these joint activities. Domestic funding also needs to be increased.
	Poor coordination at sub-national level (committees) – multiple implementers.	Strengthen the formulation and functionality of sub-national committees through continued support from the national level coordination mechanism.
	M&E issues: poor harmonisation of TB and HIV data at health facility level (registers), different partners collecting different data at different times, and limited human resources to analyse data on TB/HIV indicators.	Development of automated dashboards to track progress and make appropriate decisions.
Alignment of critical components of the health system	TB and HIV services provided separately despite efforts to integrate; separate training curricula; lack of SOPs; high staff turnover.	Prioritize funding for capacity building (health workers and M&E staff). Provide integrated training on TB and HIV in medical and nursing schools.
	Difficult to forecast need for GeneXpert cartridges as these are now used by all for different purposes.	Joint budget planning for procurement of commodities.
	Integrated sample courier system is challenging.	
	Difficult to implement new WHO recommendations since these were not considered in the allocation process.	Allocation process to take into account the financial gap created by the introduction of new guidelines or technologies.
	Limited involvement of private health facilities.	Public-private partnerships.
Integrated TB and HIV service	Different countries struggle with different aspects: TB screening in PLHIV, completion of IPT, surveillance of adverse effects of IPT, TB infection control, adherence counselling.	In terms of TB infection control, renovate facilities to create opportunities for one-stop services.
	Limited funding for community systems strengthening.	

5. Way forward

While this assessment had some limitations, the results provide useful insights into how countries applied the Global Fund Board policy on the joint TB and HIV application and, more importantly, how programs are evolving to address the high burden of co-infection with TB and HIV.

An earlier consultation meeting to draw lessons from the development of joint TB and HIV application that took place from 18 to 20 November 2015 in Addis Ababa Ethiopia concluded that overall there was strong support among meeting participants for the joint TB and HIV application approach and joint TB and HIV programming as the way forward in improving the effectiveness and impact of national HIV and TB programs. As per the Addis Ababa meeting, the joint TB and HIV application development process resulted in greater harmonization of the cross-cutting areas such as procurement and supply chain management, supervision, M&E and delivery of integrated service for TB and HIV.

Those findings were in line with this current assessment—although joint supervision, M&E, and fully integrated one-stop services could be improved. In terms of challenges, the labour-intensive process of joint TB and HIV application development and grant making—including complex tools—are echoed in the current meeting. However, the earlier meeting could not provide evidence on actual implementation and impact of the joint TB and HIV application, which was provided in the current assessment.

It is hoped that the information generated by the desk review, interviews, and workshop can be used by countries and the Global Fund Secretariat to prioritize and scale-up good practices in the implementation of the joint TB and HIV application for TB and HIV, as well as inform the update of the TB/HIV information note.

Countries also made a number of recommendations to improve processes and approaches moving forward. Below is a summary of recommendations for the Global Fund Secretariat and partners to consider for the next funding cycle in terms of joint TB and HIV application development and grant making:

- Simplify the joint TB and HIV application templates and tools. Specifically, revise the template for the narrative, programmatic gap analysis, funding landscape, and M&E framework.
- Loosen the joint TB and HIV application requirement that all CCM members need to sign the submission.
- Accommodate slow internet connections in the electronic submission process.
- Support joint capacity building for staff of both programs to make the application process easy.
- Provide sufficient TA and financial support for joint TB and HIV application development and grant making process.
- Consider existing government policies when listing requirements for the Global Fund.
- Be clear about the minimum level of country consultations.
- Take into account existing government budget systems. Revise the structure for grant management and financial management.
- Consider the option of a joint TB and HIV application resulting in one single grant.
- Allow flexibility in allocation to the two disease programs.
- Increase funds allocated to health systems strengthening (HSS) or further disaggregate the HSS module so that allocation to specific activities is clearly specified.
- Maintain biannual or annual disbursements of funds, as quarterly disbursements can be problematic and thus can be delayed.
- Ensure clear budget lines for the application process.

- Allow the Global Fund funds to be used (or raise funds from other donors for this) for the technical work that needs to happen in between joint TB and HIV application development periods. The preparation of the joint TB and HIV application is an ongoing task, so even whilst the CCM focuses on implementation, a team should be working on gathering information and building buy-in for the next joint TB and HIV application.
- Provide or ensure continuous support for TB/HIV integration.
- Support the development of joint costed NSPs and joint gap analysis.
- Create opportunities for the sharing of best practices between countries.
- Support partners to develop one national system: partners should collect data by strengthening and using one national system.
- Create a harmonized timeline for partner reporting.
- Ensure regular communication to promote mutual understanding.
- Support one coordinator for both diseases as it assists in implementation of the grant.
- Support community monitoring and response and linking the community reporting to DHIS2.
- Support a joint research agenda
- Repeat the assessment after the next funding cycle in order to determine progress over time, especially with respect to the implementation and impact of the single joint TB and HIV application.

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Abbreviations

ART	Anti-retroviral Therapy
CAR	Central Africa Republic
CCM	Country Coordinating Mechanism
DHIS	District Health Information Software/System
EID	Early Infant Diagnosis
FPM	Fund Portfolio Manager
HIS	Health Information System
HIV	Human Immunodeficiency Virus
HTS	HIV Testing Services
IPT	Isoniazid Preventive Therapy
KPI	Key Performance Indicators
M&E	Monitoring & Evaluation
MDR	Multi-Drug Resistant
MOH	Ministry of Health
NFM	New Funding Model
NSP	National Strategic Plan
PEPFAR	United States President's Emergency Plan for AIDS Relief
PLHIV	People Living with HIV
PMTCT	Prevention of Mother-To-Child Transmission
PPM	Public Private Mix
PR	Principal Recipient
PUDR	Progress Update and Disbursement Request
RSSH	Resilient and Sustainable Systems for Health
SOP	Standard Operation Procedure
SR	Sub-Recipient
TA	Technical Assistance
TB	Tuberculosis
ToR	Terms of Reference
TPT	Tuberculosis Preventive Therapy
TWG	Technical Working Group
UNAIDS	Joint United Nations Program on HIV and AIDS
VMMC	Voluntary Medical Male Circumcision
WHO	World Health Organization