



Current Status on the implementation of TB- HIV collaborative activities in the Americas

Results of a survey in the countries of the Region

2012

Acknowledgements

We would like to express our gratitude to all the countries of Latin America and the Caribbean, and especially to the National Tuberculosis and HIV/AIDS programs that reported data to PAHO/WHO and answered the survey questions. Without their contribution and effort, it would not have been possible to produce this report. Likewise, we would like to thank the TB and HIV focal points of the PAHO country offices that facilitated the collection and revision of national data.

We would also like to thank Dr. Cleophas D'Auberge, who participated in the preparation of the survey format and Nosheen Ahmad, who helped in the compilation of data.

This report was elaborated through a consultancy by Dr. Omar Sued in coordination with Dr. Rafael Lopez, from PAHO's Regional TB Program. Camila Pichio, Pablo Aquino and Dr. López translated and edited the English version of this report originally written in Spanish.

Table of Contents

Abbreviations	4
Executive Summary	5
Introduction and Goals	7
Methodology.....	7
Epidemiologic Context	8
Results of the Survey by Collaborative Activity	11
A. Establish the Mechanism for Collaboration:	11
A.1 Set up a coordinating body for effective TB/HIV collaboration at all levels.....	11
A.2 Conduct surveillance of HIV prevalence among tuberculosis patients	13
A.3 Carry out joint TB/HIV planning.....	13
A.4 Conduct monitoring and evaluation	14
B. Decrease the burden of tuberculosis in people living with HIV/AIDS	18
B.1 Establish intensified tuberculosis case-finding	18
B.2 Introduce isoniazid preventive therapy.....	18
B.3 Ensure tuberculosis infection control in health care and congregate settings	19
C. Decrease the burden of HIV in tuberculosis patients	21
C.1 Provide HIV testing and counseling	21
C.2 Introduce HIV prevention methods	21
C.3 Introduce co-trimoxazole prevention therapy	22
C.4 Ensure HIV/AIDS care and support	22
C.5 Introduce antiretroviral therapy.....	24
Factors that facilitate or complicate the implementation of TB/HIV collaborative activities	26
Opportunities to promote research.....	27
Conclusions and Recommendations.....	28
Update on interim policy regarding collaborative activities.....	33
References:	35
Annex 1: Format of Survey.....	36
Annex 2: TB/HIV programmatic and epidemiologic data	46

Abbreviations

Terms used in the text:

ACSM	Advocacy, Communication and Social Mobilization
AIDS	Acquired Immune Deficiency Syndrome
ART	Antiretroviral Treatment
CD4	CD4 lymphocyte count
CPT	Co-trimoxazole Preventive Therapy
IEC	Information, Education and Communication
INH	Isoniazid
IPT	Isoniazid Preventive Therapy
IRS	Immune Reconstitution Syndrome
HIV	Human Immunodeficiency Virus
LTBI	Latent Tuberculosis Infection
MSM	Men who have sex with men
PAHO	Pan American Health Organization
PPD	Purified Protein Derivative (Tuberculosis Skin Test)
TB	Tuberculosis
WHO	World Health Organization

Countries:

ANB	Antigua and Barbuda	HON	Honduras
ARG	Argentina	JAM	Jamaica
BAR	Barbados	MEX	Mexico
BAH	Bahamas	NIC	Nicaragua
BLZ	Belize	PAN	Panama
BRA	Brazil	PAR	Paraguay
BOL	Bolivia	PER	Peru
CAN	Canada	TRT	Trinidad and Tobago
CHI	Chile	URU	Uruguay
COL	Colombia	USA	United States of America
COR	Costa Rica	VEN	Venezuela
CUB	Cuba		
DOM	Dominica		
DOR	Dominican Republic		
ECU	Ecuador		
ELS	El Salvador		
GRE	Grenada		
GUT	Guatemala		
GUY	Guyana		
HAI	Haiti		

Executive Summary

Since the publication of TB/HIV collaborative activities in 2004 by the WHO, PAHO has worked jointly with the countries of The Americas Region to accelerate the implementation of these activities. Every year, in a regional meeting in which TB and HIV program managers from the countries with the highest TB/HIV co-infection rate participate, the situation is evaluated and priority activities for the following year are discussed. During the last TB/HIV meeting held in Panama in July of 2011, a survey was initiated to document the current status of collaborative activities and the difficulties with their implementation. This survey was later extended to the rest of the countries in the Region. This document contains a summary of the main findings of this survey and a series of recommendations are proposed.

Currently, the majority of the countries have coordination mechanisms to guide TB/HIV collaborative activities which have demonstrated to be a valuable means to discuss policies and plans for implementing TB control activities among people with HIV. Most teams are multidisciplinary, even though the majority still does not include key actors such as organization for the control of TB infection, detention centers, and drug-users care sites. Only 20% has civil society representatives. In 29% of countries there is no joint planning of TB/HIV activities or planning is carried out independently by each program.

HIV surveillance in TB patients has been implemented in all the countries of the region. However, only 46% of the TB cases know their HIV test result. TB and HIV programs have recognized difficulties that they need to work on, like the necessity to train and sensitize human resources, reduce the logistical barriers and improve access to HIV tests.

On the other hand, only 20/35 countries record information on the 3 considered priority indicators. Among factors preventing adequate monitoring, we find limitations of information systems, difficulties for sharing information between the TB and HIV programs and, in some countries, the low prevalence of co-infection or federal structures with sub-national health autonomy.

The number of countries that report TB screening in people with HIV is low (12/35) and, with the exception of HAI, countries with higher burden of HIV are not reporting this activity.

The majority of the countries neither report on individuals who receive Isoniazid Preventive Therapy (IPT). The PPD requirement in 2/3 of the countries surveyed, and its practical difficulties were mentioned as main factors limiting this activity.

Almost every country has norms to avoid the spread of TB in health facilities (only BAR, HAI, NIC, and STL do not have these specific norms). Even so, tuberculosis among health professionals is a relatively frequent occurrence as the reported evidence shows: In 2010, 635 cases were reported, in addition to other 432 "estimated" cases.

Most likely, the difficulty in registering also affects the indicator on Co-trimoxazole prophylaxis, since most countries declare that this intervention is standardized in their treatment guidelines and provided for free. However, less than half reports it to WHO.

With respect to the integrated care of co-infected patients, models of service delivery are variable. Thus, an association between care types (decentralized, centralized in HIV centers or in TB centers) and indicators of antiretroviral treatment (ART) coverage cannot be established. Traditionally in the region, tuberculosis is treated in primary care centers, while HIV has been treated in few national referral centers. Today, most countries are implementing processes of decentralization for HIV care, which should be taken into consideration as an opportunity to promote the integration of TB/HIV care in both programs.

Most of the countries have norms that indicate ART in patients with TB, regardless of the CD4 count. Nevertheless, only 11 countries show ART coverage at a percentage of more than 80% for people with TB and HIV. In addition, 20% of the countries show ART coverage values in co-infected patients significantly lower than the national ART coverage.

The early start of ART in persons with TB/HIV co-infection and advanced immune suppression is linked to an important mortality reduction. This evidence has been incorporated into the recent WHO guidelines for HIV treatment, which now recommend ART to all TB/HIV patients within the first 2 to 8 weeks of commencement of tuberculosis treatment. The limitation most frequently mentioned for timely HIV treatment initiation was the lack of early identification of the HIV status. Other reasons less frequently mentioned were the limitations of trained human resources, coordination and logistics problems, and also refusal from patients.

The results of this survey allowed an analysis of the current regional and country situation in order to provide recommendations for the continuous support to countries on the implementation of TB-HIV collaborative activities. Among them, to continue the conformation of TB/HIV coordinating bodies that facilitate joint TB/HIV planning, training coordination and collection of information is highlighted. PAHO must continue working with countries for improving the monitoring of TB/HIV co-infection epidemiological situation, the expansion of collaborative activities and interventions proposed by WHO/PAHO guidelines, based on the last scientific evidence available. Examples of these interventions include the clinical algorithms for TB screening on people living with HIV, the expansion of IPT and the improvement of TB infection control to reduce the number of healthcare professionals with active TB. In addition to this, the revision of more comprehensive care models to ensure early access of TB patients to HIV diagnosis, ART and CPT. It is also important to promote the inclusion of civil society representatives in the planning and implementation of policies and programs and in the monitoring and evaluation of TB/HIV collaborative activities at all levels.

Introduction and Goals

Since the publication of the TB/HIV collaborative activities in 2004 by WHO, PAHO has adapted them and worked jointly with the countries in order to accelerate the implementation of these activities. Each year, in a regional meeting with the managers of the HIV and TB programs from countries with the highest co-infection burden, the situation is evaluated and priority activities for the next year are identified and planned. The last TB/HIV meeting was held in Panama in July of 2011, aimed at determining the progress made in terms of the implementation of TB/HIV collaborative activities in the Americas. In such occasion, the participants completed a survey to document the current situation and the difficulties encountered during the implementation of the program that later was extended to the rest of the countries in the region. In this document, we summarize the principal findings of this survey, along with conclusions and specific recommendations.

Methodology

In July of 2011, the VII Regional Meeting of Collaborative TB-HIV Activities was held in Panama, with the participation of managers or representatives of national TB and HIV programs from countries with the highest co-infection rates in the Region: Bahamas (BAH), Belize (BLZ), Brazil (BRA), Colombia (COL), El Salvador (ELS), Guatemala (GUT), Guyana (GUY), Haiti (HAI), Honduras (HON), Jamaica (JAM), Nicaragua (NIC), Panama (PAN), Paraguay (PAR), Peru (PER) Dominican Republic (DOR), Surinam (SUR), Trinidad & Tobago (TRT) and Venezuela (VEN). During this meeting, the representatives of the countries filled a survey describing the advances on the implementation of the collaborative activities.

The survey has two parts, the first one consists of 39 questions directed to describe the implementation and epidemiologic data of the year 2010. The second part has a table with the description of the use of 13 proposed indicators to monitor and evaluate the collaborative activities (**Annex 1**).

During August and September of 2011 the same survey was distributed to the rest of PAHO's member states: Antigua and Barbuda (ANB), Argentina (ARG), Barbados (BAR), Bolivia (BOL), Canada (CAN), Chile (CHI), Costa Rica (COR), Cuba (CUB), Dominican Republic (DOM), Ecuador (ECU), Granada (GRE), Mexico (MEX), Saint Lucia (STL), San Kitts y Nevis (SKN), San Vicente and The Grenadines (SVA), Uruguay (URU) and the United States (USA), completing 35 countries, the total number of PAHO's member states. Puerto Rico and other European and American territories in the Caribbean were excluded. The data from Puerto Rico, representing 80% of the cases in the territories, were notified within the United States data.

All surveys were evaluated and revised with the support of the national TB and HIV program managers, as well as by the respective PAHO focal points.

During the period between October 2011 and February 2012, the survey responses were received, data was reviewed, clarifications and verifications were requested, and inconsistencies were corrected and placed into a unified database.

To contextualize this information, between March and June of 2012, additional data was consolidated into a database that also included other variables from the tuberculosis database of the WHO [1], from the Universal Access Reports 2011 [2], and from the UNAIDS epidemiological report [3] (**Annex 2**).

A descriptive analysis was done from quantitative variables. Frequencies, medians and averages were calculated accordingly.

Epidemiologic Context

It is estimated that in 2010, there were 267,000 TB cases in the region. The countries with higher TB incidence (>100 x 100,000 habitants) were HAI, SUR, BOL, GUY, and PER. Likewise, it is estimated that there were 20,168 deaths not associated with HIV. By means of the information systems from each country, 214,000 cases and 11,304 deaths were reported, which corresponds to a 5.3% mortality rate in the specific cases reported. In descending order, GRE, SVA, ANB, JAM, ECU, MEX, PAR, URU, and COL are the countries with the highest mortality rates, with values that fluctuate between 25% and 10%.

The last estimation of people living with HIV in the region, from 2009, was approximately 3 million people, of which 170,000 were new infections. The number of people with HIV registered in the programs in 2010 remains unknown but, in that year, approximately 92,500 people started ART. At the same time, there were approximately 96,000 deaths in the Region.

The estimated number of TB/HIV co-infected patients for 2010 was 34,500. According to the information reported to WHO by countries of the region, during 2010 103,641 HIV tests were performed on TB patients, of which 18,200 were positive (18%). The number of TB cases in people living with HIV (all forms) was 18,875, which corresponds to 9% of all cases of tuberculosis declared in the same period. BRA, HAI, MEX, COL, PER, USA, ARG, DOR, ECU and VEN represent 90% of reported co-infection cases in the Region. The HIV prevalence in TB patients is higher and more variable in some Caribbean Countries and Territories. This is mostly because of the high occurrence of HIV, the low prevalence of tuberculosis in the general population, and the low population rate. Considering only the reported number of TB cases that are aware of the HIV result, the HIV prevalence in ARG or BRA is higher (56% and 23% respectively), which may represent a potential bias in the offering of HIV testing to people with higher risk of HIV, or more likely, a bias in the reporting of positive cases, as was recently documented in Argentina [4]. When considering the reported TB cases as the denominator, the co-infection prevalence represents 8% and a 12%, for ARG and BRA, respectively.

In 2010, 3,333 deaths were reported among TB-HIV patients, which correspond to a mortality rate of 17.7% of reported cases. In some countries, higher mortality rates are observed because of the low volume of total cases or because of the difficulty to report all cases treated. For example, COR, PAN,

URU, and HON report 70%, 45%, 33%, and 30% of deaths, respectively, while BAH, BLZ, GRE and SVG show 31%, 28%, 100%, and 33%. In this last group, mortality rates should not be considered due to the low total number of co-infection cases.

Distribution by age and gender of TB/HIV cases in 2010

In total, 28 of 35 countries provided data separated by gender and age. Another 5 countries notified data only for a fraction of patients due to limitations in the information systems. In total, there is data by gender for 14,282 patients and by age for 14,837 patients. Most were men, representing 69% of the cases. In HAI and SAV, women represented more than 50%. Almost 97% were over the age of 15, but in BLZ, ECU, GUY, HAI and JAM those under 15 years of age surpassed 5%. (Figures 1 and 2)

Figure 1: TB-HIV co-infection cases by gender

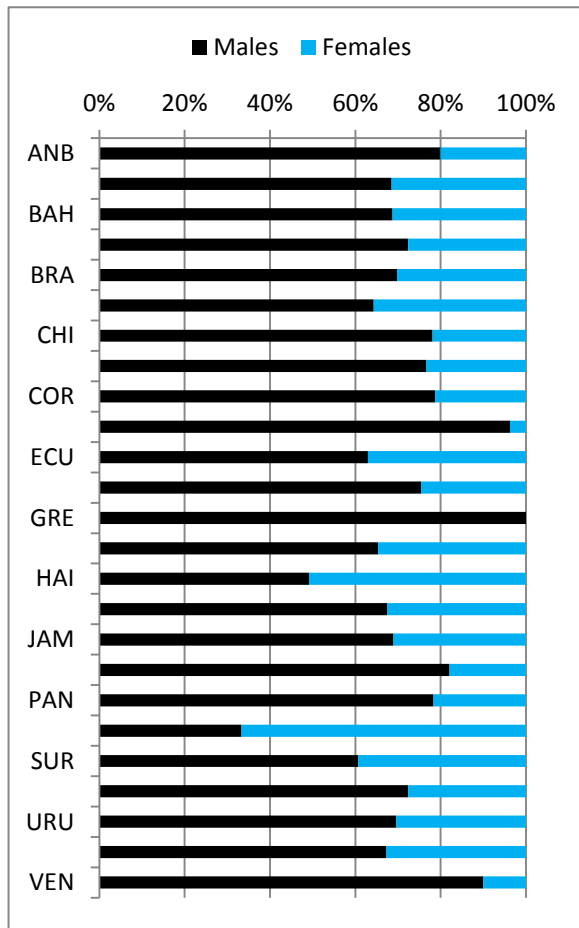


Figure 2: TB-HIV co-infection cases by age

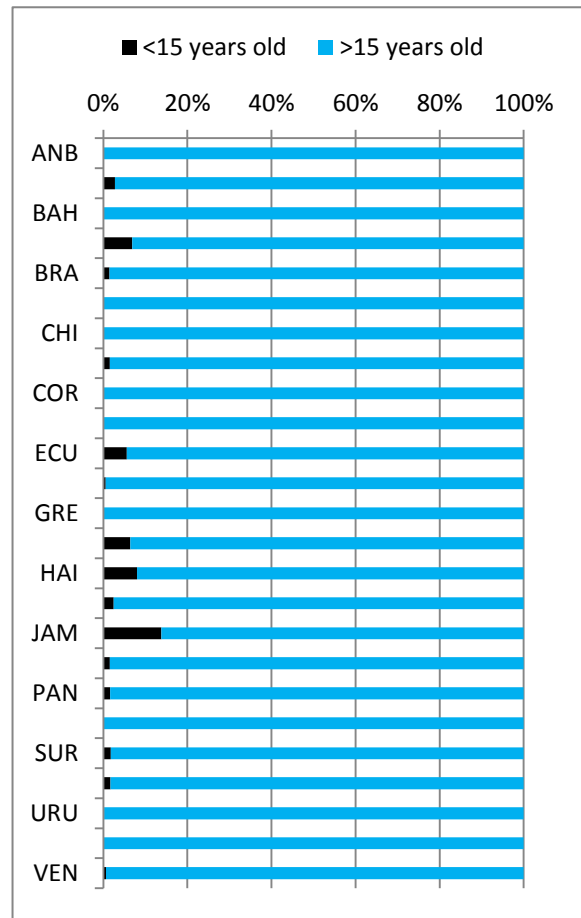


Table 1: Summary of reported TB/HIV cases in 2010

Country	Total TB/HIV cases, 2010	TB/HIV male cases	TB/HIV female cases	TB/HIV in <15 years old	TB/HIV in >15 years old	Deaths due to TB/HIV
ANB	5	4	1	0	5	0
ARG	584	400	184	16	568	52
BAH	16	11	5	0	16	4
BAR	0	0	0	0	0	0
BLZ	29	21	8	2	27	8
BOL	130	NA	NA	NA	NA	19
BRA	8,558	4,952	2,144	102	6,986	1,911
CAN	28	18	10	0	28	5
CHI	32	25	7	0	32	0
COL	1,231	605	184	12	777	161
COR	47	37	10	0	47	33
CUB	53	51	2	0	53	12
DOM	1	NA	NA	NA	NA	0
DOR	547	NA	NA	NA	NA	39
ECU	526	331	195	30	508	0
ELS	180	135	44	1	179	20
GRE	1	1	0	0	1	1
GUT	325	NA	NA	NA	NA	30
GUY	209	102	54	10	146	32
HAI	1,891	929	962	151	1,740	297
HON	200	135	65	5	195	60
JAM	29	20	9	4	25	6
MEX	1,645	862	188	16	1,034	249
NIC	37	NA	NA	NA	NA	3
PAN	249	195	54	4	245	114
PAR	144	NA	NA	NA	NA	10
PER	853	NA	NA	NA	NA	48
STL	0	0	0	0	0	0
SKN	0	0	0	0	0	0
SVA	3	1	2	0	3	1
SUR	56	34	22	1	55	15
TRT	58	42	16	1	57	13
URU	622	431	188	1	621	44
USA	104	70	34	0	104	34
VEN	482	434	48	3	479	112

NA: Not available.

Survey Results by Collaborative Activity

All countries completed and submitted the survey forms and 35 were received (100%). DOM did not complete questions 18-25, and SKN and DOM did not complete the section on monitoring and evaluation indicators.

The results of the survey were organized in 3 sections, following the 3 objectives and the 12 corresponding TB/HIV collaborative activities internationally recognized since 2004 [5]:

A. Establish the mechanisms for collaboration

- A.1 Set up a coordinating body for TB/HIV activities effective at all levels
- A.2 Conduct surveillance of HIV prevalence among TB patients
- A.3 Carry out joint TB/HIV planning
- A.4 Conduct monitoring and evaluation

B. Decrease the burden of TB among people living with HIV/AIDS

- B.1 Establish intensified TB case-finding
- B.2 Introduce isoniazid preventive therapy
- B.3 Ensure TB infection control in health care and congregate settings

C. Decrease the burden of HIV in TB patients

- C.1 Provide HIV testing and counseling
- C.2 Introduce HIV prevention methods
- C.3 Introduce co-trimoxazol preventive therapy
- C.4 Ensure HIV/AIDS care and support
- C.5 Introduce antiretroviral therapy

A. Establish the Mechanisms for Collaboration:

Since 2004, PAHO/WHO has promoted the adoption of the collaborative activities allowing the establishment of these coordination mechanisms for the planning and execution of such TB/HIV activities in the countries of the region.

The recommended activities in this section include the creation of a coordinating body at all levels, the surveillance of co-infection cases, joint planning and monitoring of such activities. A regional summary describing the situation of all activities mentioned in this section is presented in **table 3**.

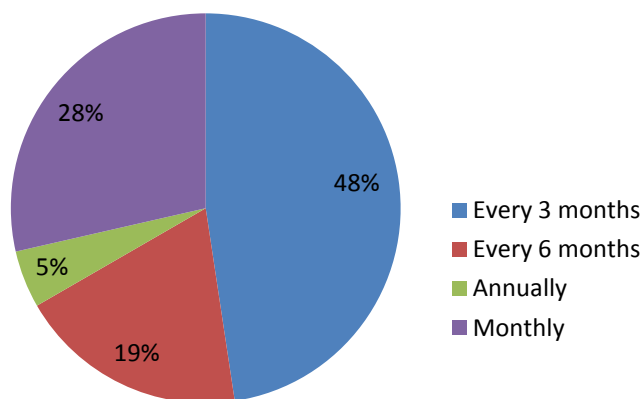
A.1 Set up a coordinating body for TB/HIV activities effective at all levels

Currently, 21 out of 35 countries surveyed (60%) have established a coordinating body with variations in its inception and state recognition throughout the region. As examples, DOR, GUT or ELS can be mentioned as countries where the coordinating body is formally incorporated within the ministerial structures. Others, such as ARG and BRA, have fully active coordination mechanisms but without any official structure. In some countries of the Caribbean, the coordination and surveillance of both

programs fall under the same unit or even the same person, like in ANB, BAH, and BLZ. In PER, COR, USA and CAN, there is an absence of coordinating bodies, however, it is mentioned that other government agencies exist which are involved in the planning of public health activities and epidemiological analysis and carry out some of these activities. Of the countries that have a national coordinating body, 10 have sub national bodies (provincial or regional). Ecuador does not have a national body, but a regional committee in the province of Guayas.

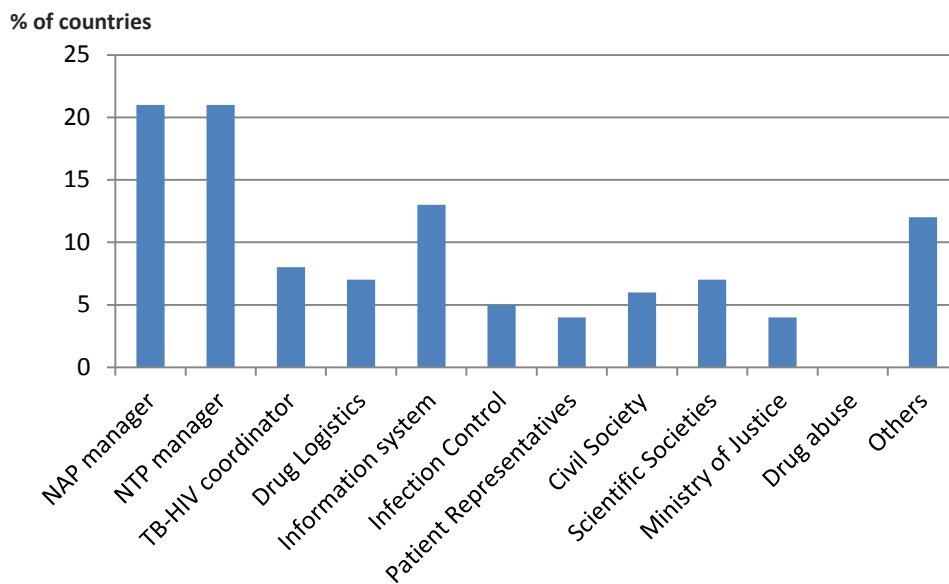
The frequency of meetings of the coordinating bodies was reported to be quarterly in 48% of the countries (10/21), monthly in 28% (6/21) and every six months in 19% (4/21), and in only one case they meet once a year (figure 3).

Figure 3: Frequency of meetings of coordinating bodies [n=21]



The composition of these coordinating bodies is highly variable. In all of them, representatives of the national HIV/AIDS and TB programs participate, and in 62% (13/21 countries) of the cases a representative of the information systems from a program or from the national epidemiologic surveillance area also participates. Approximately, 1/3 of the coordinating bodies have representatives from the drug logistics areas, universities, scientific or civil societies. In a lesser proportion (less than 20%), they have a representative from infection control areas, prisons or patient groups. In more than 50% of the countries (12/21) additional participants were mentioned, such as representatives of reference laboratories, representatives of cooperation organizations or international consultants. There is no participation of representatives involved in the care of drug users in any of the countries (figure 4). Half of the countries (18/35, 51%) recognize that a significant community participation in the implementation of TB/HIV collaborative activities has not yet been achieved.

Figure 4: Composition of the TB/HIV coordinating bodies (in percentage) (n=35)



A.2 Conduct surveillance of HIV prevalence among TB patients

All the countries of the region have included prevalence of HIV among TB patients in their tuberculosis surveillance systems and send that information to PAHO/WHO annually. The amount and quality of data on surveillance for TB-HIV co-infection cases has improved significantly in the last few years, even though the need to keep strengthening the systems of registry and notification is still prominent.

A.3 Carry out joint TB/HIV planning

Of the 35 countries, 57% (20/35) inform that the collaborative activities are present in their national TB and/or HIV strategic plans. In 23% (8/35) of the countries a specific plan for TB-HIV exists, while in 31% (11/35) the planning is done independently for each program. Only 3 countries (DOM, STL and URU) do not plan for TB-HIV collaborative activities. In DOM and STL, there is no planning because co-infection does not constitute a public health problem (neither country reported a case of co-infection in 2010). In URU, even though TB/HIV activities are currently not jointly planned, activities have been scheduled for the period 2012-2016.

Almost all countries (91%, 32/35) declared to carry out training activities for healthcare workers regarding co-infection specific topics. TRT reported not to perform training, CAN does not have this information since there activities are planned and executed at local level, and this question was not answered by DOM. Half of the countries perform the training as a joint activity between TB and HIV programs. Usually, these trainings target clinical aspects (86%), in particular HIV-testing and counseling (60%), managerial aspects (46%) or other issues (14%), including, e.g., specific training in service integration, or local specific needs. The usual duration of these activities is 2 or 3 days (57%), based on PAHO/WHO materials (63%), own materials (46%) or material from other sources (34%). In this last

category, most of the cases are Caribbean countries using the CHART guidelines (Caribbean HIV/AIDS Training Network) developed jointly with PAHO.

With respect to the activities of ACSM and IEC, only in 17% of the countries (6/35) the TB and HIV programs make joint planning of these activities (BAR, BOL, CUB, ELS, MEX, and PAN). In 54% of the countries (19/35) these activities are planned independently by the TB or HIV program, while in 29% (10/35) there is no planning for these activities.

A.4 Conduct monitoring and evaluation

Most of the countries use the information that is commonly collected from both programs to build monitoring and evaluation indicators and to produce reports that are sent to PAHO/WHO. **Figures 5 and 6** show the information available in each program in countries. In HIV programs, the presence of active tuberculosis and the use of ART are the most frequent available indicators. Less than 50% of the countries have, in their HIV program, information about presumptive TB, screening of TB in people living with HIV, INH or CPT, referral to the TB program or TB death. On the other hand, in TB programs the indicator usually available is HIV testing and counseling. Less than 50% of the countries have information about ART initiation date, use of CPT, and referral to the HIV program.

Figure 5: Information available in the HIV program

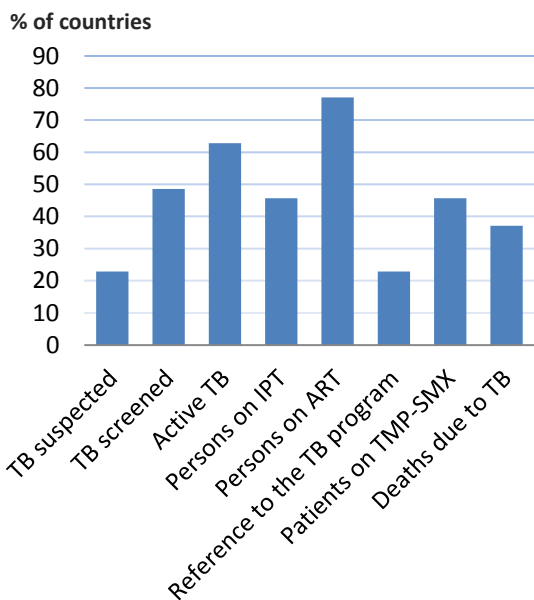
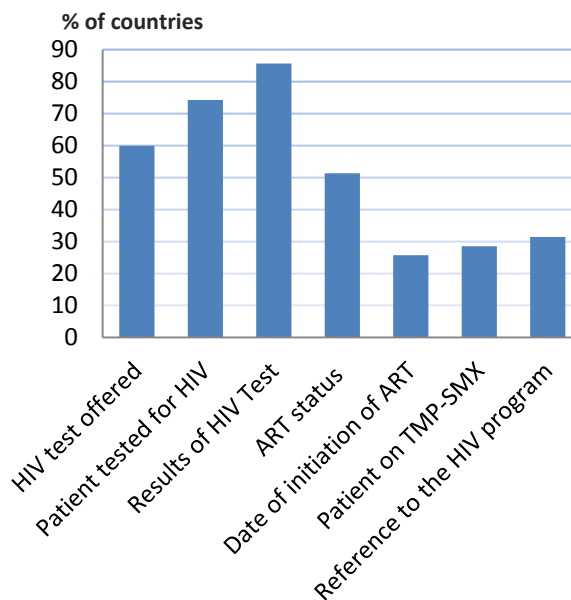


Figure 6: Available information in the TB program



Regarding recording systems, only 15% (5/33) of the countries have TB and HIV electronic registries that are somehow linked between each other (BLZ, CUB, ELS, GUY, and PAN), while 24% (8/33) of the registries are not linked in any form. Half of the countries (51%, 17/33) have independent registries that

allow capturing data for at least one of the WHO recommended indicators. The remaining 3 countries include STL that does not have a monitoring system due to the low number of cases, and CAN and USA where the information systems depend on the states or provinces.

Every year, all countries collect and report information related to TB/HIV collaborative activities to PAHO/WHO, in order to prepare international reports such as the Global Tuberculosis Report, the UNGASS Reports and the Universal Access Report. In order to standardize the information, the WHO published in 2009 a revision of the TB-HIV monitoring and evaluation guide, initially published in 2004. The most important change in this revised version is the reduction of the number of indicators from the 20 initial ones to 13, of which 3 are considered as priority. As in the original one, the new version focuses on monitoring activities from B and C objectives.

In order to learn about the use of these indicators, the countries were asked to fill out a specific form to report which indicators were being used and which expected to be incorporated. Of the 35 countries that participated in the survey, neither DOM nor SKN completed this section (**Table 2**).

The median of indicators reported by a country is 8, GUY being the only country that has systematically incorporated the 13 indicators in their surveillance system. 57% of the countries (20/35) collect the 3 priority indicators.

The indicators most frequently obtained from the information systems are: a) the proportion of all registered TB patients who had documented HIV status recorded who are HIV-positive (indicator C.1.2.1), with 97% of the countries (32/33) reporting this indicator; b) the proportion of TB patients with known HIV status (indicator C.1.1), which has been registered in 91% of the countries (30/33); c) the case detection rate of TB patients with documented HIV-positive status (indicator C.1.2.2) in 82% of the countries (27/33); d) the percentage of HIV-positive patients who received TB treatment (indicator B.1.2.1) in 70% of countries (23/33), and e) the proportion of HIV-positive registered TB patients given ART during TB treatment (indicator C.5.1) in 70% (23/33) of the countries. The 3 priority indicators are included in this group.

The indicators that have least been used in 2010 were the proportion of health-care workers employed in facilities providing care for people living with HIV who developed TB during the reporting period (B.3.2), the availability of free condoms at TB services (C.2.1), and the percentage of HIV-positive patients who were screened for TB in HIV care or treatment settings (B.1.1).

Table 2: Number of countries that collect and report the 13 indicators to monitor TB-HIV collaborative activities (n=33)

TB/HIV Indicators	Collected in 2011 (%)	To be collected in 2012 (%)
B.1.1: Percentage of HIV-positive patients who were screened for TB in HIV care or treatment settings	11 (33.3)	15 (45.5)
B.1.2.1: Percentage of HIV-positive patients who received TB treatment *	23 (69.7)	26 (78.8)
B.1.2.2: (UNGASS core indicator 6) Percentage of estimated HIV-positive incident TB cases that received treatment for TB and HIV	18 (54.5)	24 (72.7)
B.2.1: Percentage of new HIV-positive patients starting IPT during the reporting period	13 (39.4)	20 (60.6)
B.3.1: Proportion of health-care facilities providing services for people living with HIV that have infection control practices that include TB control	15 (45.5)	17 (51.5)
B.3.2: Proportion of health-care workers, employed in facilities providing care for people living with HIV, who developed TB during the reporting period	8 (24.2)	12 (36.4)
C.1.1: Proportion of TB patients with known HIV status*	30 (90.9)	31 (93.9)
C.1.2.1: Proportion of all registered TB patients who had documented HIV status recorded who are HIV-positive	32 (97)	33 (100)
C.1.2.2: Case-detection rate of TB patients with documented HIV-positive status	27 (81.8)	29 (87.9)
C.2.1: Availability of free condoms at TB services	10 (30.3)	14 (42.4)
C.3.1: Proportion of HIV-positive TB patients who receive CPT	17 (51.5)	21 (63.6)
C.4.1: Proportion of HIV-positive TB patients enrolled in HIV care services during TB treatment	20 (60.6)	24 (72.7)
C.5.1: Proportion of HIV-positive registered TB patients given ART during TB treatment*3	23 (69.7)	28 (84.8)

*Priority indicators

Table 3: Summary of the situation per country of activities under objective A: “Establish mechanisms for collaboration”

Country	Presence of a TB/HIV coordinating body	Monitoring the HIV prevalence in TB patients	TB/HIV activities planning in HIV and TB programs	Number of country's indicators in use from the 13 recommended	Number of country's priority indicators in use from the 13 recommended
ANB	Yes	Yes	Independent	12	3
ARG	Yes	Yes	Joint	3	0
BAH	No	Yes	Independent	10	3
BAR	Yes	Yes	Joint	5	3
BLZ	No	Yes	Joint	8	3
BOL	Yes	Yes	Joint	7	2
BRA	Yes	Yes	Joint	3	1
CAN	No	Yes	Joint	2	1
CHI	Yes	Yes	Joint	0	0
COL	Yes	Yes	Joint	3	1
COR	No	Yes	Independent	10	3
CUB	Yes	Yes	Joint	12	3
DOM	No	Yes	No plans indicated	NA	NA
DOR	Yes	Yes	Joint	8	2
ECU	No	Yes	Independent	3	1
ELS	Yes	Yes	Joint	11	3
GRE	No	Yes	Independent	11	3
GUT	Yes	Yes	Joint	9	3
GUY	Yes	Yes	Joint	13	3
HAI	No	Yes	Independent	7	2
HON	Yes	Yes	Independent	7	2
JAM	No	Yes	Joint	7	3
MEX	Yes	Yes	Joint	12	3
NIC	Yes	Yes	Joint	9	3
PAN	Yes	Yes	Independent	12	3
PAR	Yes	Yes	Joint	9	3
PER	No	Yes	Independent	9	3
SKN	No	Yes	Joint	NA	NA
STL	No	Yes	No plans indicated	3	1
SVA	Yes	Yes	Independent	6	3
SUR	No	Yes	Joint	8	3
TRT	Yes	Yes	Independent	11	3
URU	No	Yes	No plans indicated	3	1
USA	Yes	Yes	Joint	3	2
VEN	Yes	Yes	Joint	11	3

NA: not available.

Highlighted cells show situations requiring special attention.

B. Decrease the burden of tuberculosis in people living with HIV/AIDS

The activities under this objective include the intensified TB case finding, the introduction of preventive therapy with INH and guaranteed TB infection control in health facilities and congregate settings. These activities are also known as the “3 Is” (for Intensified Case Finding, INH preventive therapy and Infection control)

In people with HIV, early TB detection, followed by immediate ART initiation, improves their quality of life, reduces the spread of TB in the health services and the community and improves survival. Currently, TB in people with HIV can be easily detected using an algorithm based on clinical symptoms at each visit (i.e. presence of a cough, fever, weight loss, night sweats)[6]. If the person has any of these symptoms, the presence of active TB must be ruled out, in accordance with international recommendations. Hence, this algorithm should be used to identify the individuals without active TB that will benefit from prophylaxis with INH without the need of undergoing more studies.

With respect to TB infection control measures in health facilities or in congregate settings, it is necessary to identify the parties involved and to develop a plan, preferably incorporated into a broader plan for general infections control. Administrative and management control measures, environmental control measures and respiratory protection should be taken into consideration [7] .

A summary of the regional situation of the activities under objective B is presented in **Table 5**.

B.1 Establish intensified TB case-finding

The WHO recommends that all people living with HIV should be screened for TB by applying a clinical algorithm on each visit or contact with health personnel. This algorithm includes evaluating the presence of current cough, fever, weight loss or night sweats. [6]. This intervention is highly effective to rule out active TB, thus allowing prophylaxis with INH without any additional studies in settings where PPD is not a requirement to indicate the prophylaxis.

The majority of countries in this survey reported that they use diagnostic methods to rule out the presence of active tuberculosis in patients with HIV. 89% of the countries (31/35) systematically use chest X-ray and tuberculosis smear test as tools for ruling out TB. 74% of the countries (26/35) routinely use the sputum culture, 69% (24/35) use PPD, and 60% (21/35) of the countries use clinical algorithms. SUR mentioned that they have begun to use Xpert MTB-Rif as rapid-diagnostic test and another 4 countries (CAN, PER, ECU, and URU) use other methods (molecular tests, rapid cultures methods, or interferon release essays).

B.2 Introduce isoniazid preventive therapy

In 77% (27/35) of the countries, the national treatment guidelines for tuberculosis explicitly reference the preventive therapy with INH for HIV patients. At the same time, in 71% (25/35) of countries these references can be found in the national HIV-treatment guidelines as well. In 29% of countries (10/35) there is a joint guideline for TB and HIV where this indication is found. In 51% (18/35), national

recommendations for IPT were updated according to the recent WHO guidelines, while 15% (5/35) of the countries are considering its adaptation.

ARG is the only country in which the national AIDS program provides INH free of charge to patients with HIV. In 66% (23/35) the medication is provided for free through the national tuberculosis programs. In the rest of the countries, the medication is distributed through central drug provision centers (especially in the English Caribbean countries) or they are not distributed for free (USA and CAN).

The majority of the countries identified at least one difficulty in implementing the preventive treatment with INH which explains, in part, the low number of people receiving prophylaxis in the region (**Table 4**). ANB, CUB, GRE, and CHI stated that they had no difficulties implementing IPT. From this group, only CUB has a significant number of people under isoniazid therapy, while ANB and GRE reported no HIV patients receiving IPT; and CHI did not provide this information to the WHO

Table 4: Difficulties with the implementation of isoniazid preventive therapy

Difficulty	N (%)
Problems with screening for LTBI (in countries using PPD)	6 (17)
Recommended but not prescribed by service providers	5 (14)
Problem with the provision (not available in HIV centers, not given out for free, and lack of supplies)	4 (11)
Resistance from the providers (fear of generating resistance, lack of knowledge, etc.)	4 (11)
Assure the retention and adherence of patients	4 (11)
Not regulated or not yet implemented	4 (11)
Low cases of tuberculosis in the country	2 (6)
Lack of education in human resources	2 (6)
Implemented but not reported	2 (6)

In the region, it was identified the need for continued work in order to standardize the eligibility criteria for IPT. In many countries, the use of PPD for identifying LTBI continues being a norm, but is also associated to many difficulties (lack of PPD availability, lack of agreement on the criteria to define a positive result, interpretation of results problems, anergy associated to HIV, etc.).

B.3 Ensure TB infection control in health care and congregate settings

In all of these countries there is a normative framework to prevent the transmission of tuberculosis in health and congregation settings. In 80% (28/35) of the cases, this framework is specific for TB. BRA, COL, and PAN were developing their plans or national guidelines focused on TB at the time the survey was being conducted, while BAR, HAI, NIC, and STL did not have any plans or guidelines for TB infection control.

48% of the countries (17/35) have national plans for infection control not addressing specifically but including TB, 51% (18/35) have a national plan or national guidelines specific for TB control and 26% (10/35) have guidelines at institutional levels.

One of the most significant results of TB infection control failures in health facilities is the presence of new tuberculosis cases in health personnel. In 26 countries that provided information about the number of health workers with TB diagnosis in 2010 were 635 reported cases, plus another 432 “estimated” cases in United States (in this country, 4% of TB cases include the ‘health worker’ variable as possible risk for TB). After the USA, the country with more health workers with active TB reported is PER with a total of 300 cases, followed by MEX with 179, VEN with 42 and URU with 18.

Table 5: Summary of the situation per country of activities under objective B: “Decrease the burden of TB among people living with HIV/AIDS”

Country	TB screening in people with HIV		Prophylaxis with INH		Infection Control
	TB screening in HIV reported to WHO	Use of PPD for LTBI diagnosis	IPT cases reported to WHO	IPT guidelines updated after 2010 WHO guideline	Specific policy on TB and/or TB/HIV infection control
ANB	Yes	Yes	Yes	Yes	IC General plan
ARG	No	Yes	No	Yes	Under review
BAH	No	Yes	No	No	IC General plan
BAR	Yes	Yes	No	No	No
BLZ	No	No	No	Yes	IC General plan
BOL	No	No	No	Yes	IC General plan
BRA	No	Yes	No	No	In progress
CAN	No	Yes	No	Under review	Yes
CHI	No	Yes	No	Under review	Yes
COL	No	Yes	No	No	In progress
COR	No	Yes	No	Yes	Yes
CUB	No	Yes	Yes	Yes	IC General plan
DOM	No	NA	No	NA	IC General plan
DOR	Yes	No	Yes	Yes	Yes
ECU	Yes	No	No	Yes	Yes
ELS	Yes	Yes	Yes	Yes	Yes
GRE	Yes	Yes	Yes	No	IC General plan
GUT	Yes	No	No	No	Yes
GUY	Yes	Yes	Yes	No	IC General plan
HAI	Yes	Yes	Yes	Yes	No
HON	Yes	No	Yes	No	Yes
JAM	No	Yes	No	No	IC General plan
MEX	No	No	No	Yes	Under review
NIC	Yes	Yes	Ye	Yes	No
PAN	No	Yes	No	Yes	In progress
PAR	No	Yes	No	Yes	In progress
PER	No	No	Yes	Yes	Yes
STL	No	Yes	No	No	No
SKN	No	Yes	No	No	IC General plan
SVA	No	Yes	No	Yes	IC General plan
SUR	No	Yes	No	Under review	IC General plan
TRT	Yes	Yes	Yes	Yes	Yes
URU	No	No	No	No	IC General plan
USA	No	Yes	No	Under review	Yes
VEN	No	Yes	Yes	Yes	Yes

NA: Not available.

Highlighted cells show situations requiring special attention.

IC: infection control.

C. Decrease the burden of HIV in tuberculosis patients

Activities under this objective include provision of HIV counseling and testing, introduction of HIV preventive methods, CPT, care and support for people with HIV and introduction of ART. A regional summary of the situation of the activities that are included under this objective are presented in **table 8**.

C.1 Provide HIV testing and counseling

All countries systematically offer HIV testing to TB patients even though limitations to achieve full implementation are recognized. 63% (22/35) of the countries use the PAHO “Guidelines for HIV/AIDS Counseling and Testing in Tuberculosis Control Programs” published in 2006 as a reference document, or they have used it to adapt their national guidelines for counseling and testing.

With respect to the diagnostic method used, 75% (25/35) of surveyed countries have rapid HIV tests for initial diagnosis. The rest (ARG, BAH, BAR, CHI, COR, CUB, SKN, STL, URU and VEN) still use diagnostic algorithms based on serologic tests such as Elisa for screening, but ARG, COR, and VEN are already taking measures to implement the use of rapid HIV tests in health facilities.

When asked about difficulties to offer HIV testing to patients, 4 countries did not report difficulties (BAH, CHI, COR, and SUR). However, only BAH reported on the TB Global Report to have a 100% HIV-diagnosis coverage for TB patients, while the other 3 countries did not report values on this indicator. The difficulties reported by the rest of the countries included insufficient awareness and training of the health personnel on the importance of the test. Organizational issues such as the absence of HIV testing for the first level of care, and the lack of information among patients were also mentioned (**Table 6**).

Table 6: Difficulties with the implementation of HIV testing in TB patients

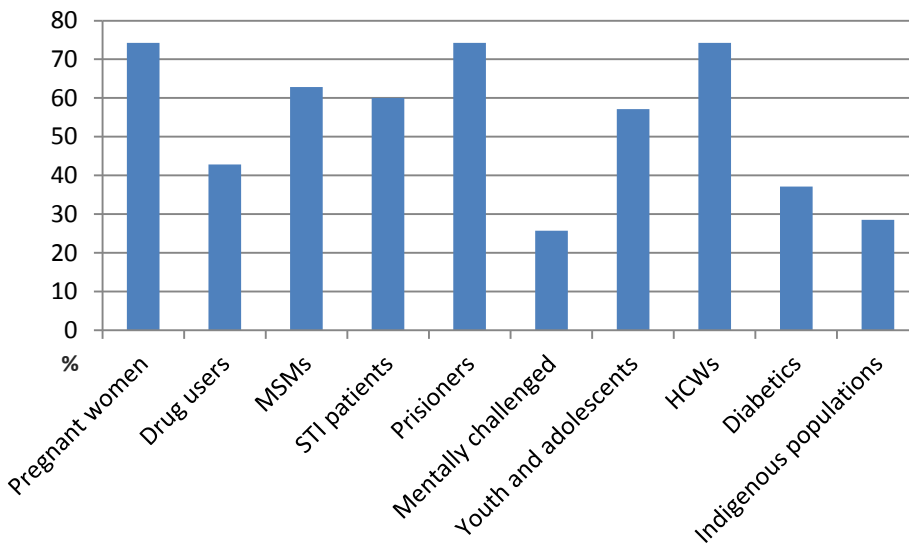
Difficulty	N (%)
Lack of health personnel to systematically offer the test	10 (29)
Lack of capacity to offer the test in TB-treatment centers	10 (29)
Lack of interest in patients (due to fear, stigmatization, lack of information on the importance of the test, etc.)	7 (20)
Geographical or cultural accessibility issues	4 (11)
Financial difficulties to assure the continuation of tests	3 (9)
Difficulties to ask for or obtain consent	2 (6)
Logistical and coordination problems to transport the samples	2 (6)

C.2 Introduce HIV prevention methods

94% of the countries (33/35) have notified specific population groups targeted for HIV and TB prevention and detection activities. Some countries with high prevalence of both infections reported that the focus is on the general public (BLZ and DOM). Some countries mentioned that these activities vary among provinces or states (CAN and USA).

74% of the countries (26/35) prioritize people in prisons, pregnant women, and health professionals in preventative campaigns. 37% (13/35) of the countries (most of them from the Caribbean and Central America) prioritize patients with diabetes, while 29% (10/35) prioritize indigenous populations (mostly countries within the Andean region). Included in the category of “others” were those with mental disabilities, sex workers, African descendants (in HON) and displaced peoples (in COL) **(Figure 7)**.

Figure 7: Prioritized populations for preventative TB/HIV co-infection campaigns



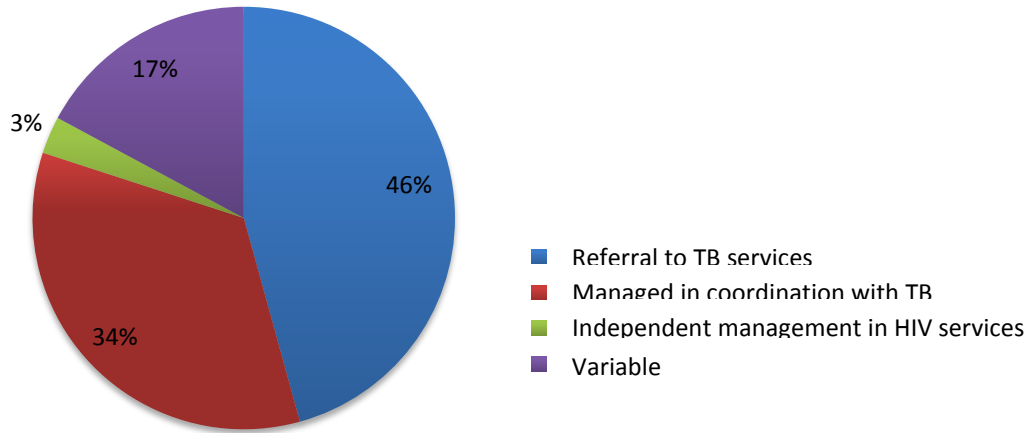
C.3 Introduce co-trimoxazole prevention therapy

94% (33/35) of countries have guidelines that indicate prophylaxis with cotrimoxazole in people with TB/HIV. STL and CAN do not have national guidelines on this matter. In general, the indication for CPT is specified in the HIV treatment guidelines in 77% of the countries (27/35) and in 43% of the countries (15/35) is also included in TB treatment guidelines. In almost one fourth of the countries (23%, 8/35) is also present in specific TB/HIV guidelines. 80% (28/35) of the countries provide CPT for free through their HIV programs and one third (34%, 12/35) also through their tuberculosis programs.

C.4 Ensure HIV/AIDS care and support

In approximately half of the countries (46%), individuals with HIV and tuberculosis are referred to TB care services for specific TB evaluation. In 34% of the countries the patients follow treatment in HIV services coordinated with TB services. In SUR, TB/HIV patients are only treated at HIV services. In 17% (6/35) of the countries the procedure varies according to the administrative organization or the health systems such as in ARG, BRA, CAN and USA, where it depends on the provision of services by each state or province. **(Figure 8)**

Figure 8: Patient management following HIV and TB diagnosis



Regarding tuberculosis treatment, 57% (20/35) of the countries provide treatment within TB services, 26% (9/35) administer treatment in HIV services but in coordination with the TB program and 17% (6/35) the provision of treatment varies, according to the administrative organization (ARG, BAR, BRA, CAN, MEX, USA) (Figure 9).

ART is administered through HIV services in 54% (19/35) of the countries, through services providing TB/HIV integrated care in 29% (10/35), and in 11% (4/35) it varies due to each country’s health services administrative organization (BRA, CAN, US, URU). In GUY and JAM, patients with co-infection are totally managed (both TB and ART treatments) in TB care services (Figure 10).

Figure 9: TB treatment provision site

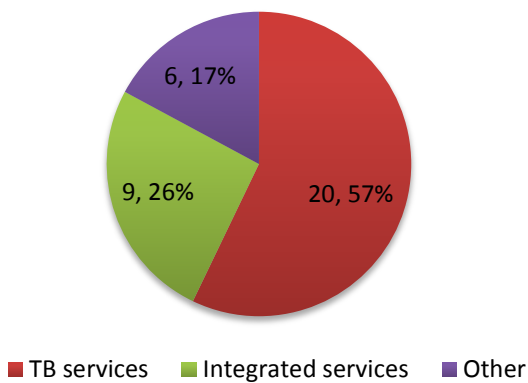
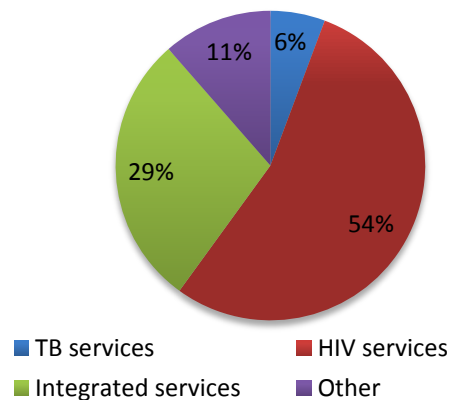


Figure 10: HIV treatment provision site



Regarding services offered to patients with TB/HIV co-infection, 94% (33/35) of the countries offer counseling on adherence, 86% (30/35) provide psychological assistance, 66% (23/35) offer patient support, 57% (20/35) offer self-help groups and 54% (19/35) offer community services. A lesser percentage offer nutritional support and directly-observed treatment.

Co-infection management and care guidelines exist in every country. The majority of them (51%, 19/35) have clinical and programmatic guidelines, 40% (13/35) have clinical guidelines only, and 9% (3 countries) only have programmatic guidelines for treatment implementation (BOL, HON, PER). SAV and USA also have other specific documents on co-infection management (strategic plans and surveillance guidelines, respectively). In 83% (29/35) the proposed interventions are found in the guidelines of both programs, either as part of each program's guidelines (21 countries) or as joint guidelines for co-infection management (based on the PAHO guidelines [8]) (8 countries). In other 5 countries, the management of co-infection is only found in TB guidelines (BAH, BAR, BLZ, CAN, SVG), while in SKN is only found in the HIV guidelines, most likely due to the small amount of TB cases.

C.5 Introduce antiretroviral therapy

Almost all of the countries (except CAN, STL, and SKN) have norms or national guidelines for HIV treatment that include indications for ART in TB/HIV patients. Management of ART for TB patients is also specified in national TB guidelines in 26% of the countries.

Two thirds of the countries (66%, 23/35) have updated the criteria to prescribe ART for all people with HIV and tuberculosis, independently from their CD4 count, 26% (9/35) of the countries continue to use the <350 CD4 count criteria, and 2 countries (SKN and SUR) still use the old criteria based on initiating treatment when the CD4 count is less than 200. In CAN there are no HIV treatment guidelines that include TB, but there are standards for TB treatment, establishing (in their last update from 2007) the criteria of treating every TB patient with <200 CD4 count. In the Canadian survey response it is specified that it is very likely that, in practice, most TB patients receive ART since HIV-treatment guidelines increasingly promote early beginning of treatment.

Among the causes that hamper early initiation of ART, the most frequently mentioned were the lack of timely diagnosis for HIV and tuberculosis, lack of acceptance by patients, training limitations and logistical problems. 11% (4/35) of the countries indicated that they do not have difficulties for early treatment (BAH, CHI, COR, SUR). All the difficulties mentioned are listed in **table 7**.

Table 7: Difficulties for early start of ART

Difficulty	N (%)
Lack or delay in access to the HIV diagnosis	11 (32)
Lack of training of health personnel	7 (20)
Logistical, reference and coordination problems between programs, services and laboratories	7 (20)
Lack of acceptance from patient (lack of information or fear of stigmatization)	7 (20)
Lack of access to free treatment or coverage	6 (17)
Fear of IRS or toxicity or non-adherence or comorbidities	3 (9)
Centralized treatment in overcrowded HIV centers	2 (6)

Table 8: Summary of the situation per country of the activities under objective C: “Decrease the burden of HIV in TB patients”

	HIV counseling and testing		HIV prevention	CPT	HIV/AIDS care	Early ART	
	TB patients knowing their HIV status (%)	Use of HIV rapid tests in the country	C.2.1 Monitoring Indicator use	% of TB/HIV that receive CPT	TB/HIV patients care site	National coverage in TB/HIV (%)	Criteria to initiate ART
ANB	100	Yes	NA	20	Coordinated	100	200-350
ARG	14	No	Yes	NA	Variable	NA	Independent of CD4
BAH	100	No	Yes	31	Referred to TB	77	Independent of CD4
BAR	100	No	NA	NA	Coordinated	NA	200-350
BLZ	99	Yes	Yes	100	Coordinated	100	Independent of CD4
BOL	24	Yes	No	0	Referred	87	Independent of CD4
BRA	50	Yes	No	NA	Variable	93	Independent of CD4
CAN	29	Yes	No	NA	Variable	NA	<200
CHI	0	No	No	NA	Referred	NA	Independent of CD4
COL	44	Yes	NA	NA	Coordinated	35	Independent of CD4
COR	0	No	Yes	NA	Referred	NA	Independent of CD4
CUB	100	No	Yes	0	Coordinated	66	Independent of CD4
DOM	38	Yes	NA	100	Variable	100	200-350
DOR	63	Yes	No	8	Referred	4	Independent of CD4
ECU	70	Yes	No	NA	Referred	81	Independent of CD4
ELS	98	Yes	No	82	Coordinated	63	Independent of CD4
GRE	100	Yes	Yes	0	Coordinated	0	200-350
GUT	63	Yes	No	100	Referred	100	Independent of CD4
GUY	100	Yes	Yes	77	Referred	59	Independent of CD4
HAI	67	Yes	No	13	Referred	10	Independent of CD4
HON	54	Yes	No	90	Referred	90	Independent of CD4
JAM	98	Yes	NA	NA	Referred	100	Independent of CD4
MEX	45	Yes	Yes	72	Coordinated	26	200-350
NIC	59	Yes	NA	100	Coordinated	100	200-350
PAN	89	Yes	Yes	55	Referred	57	Independent of CD4
PAR	34	Yes	No	0	Referred	67	200-350
PER	31	Yes	No	NA	Referred	10	Independent of CD4
STL	100	No	NA	NA	Coordinated	NA	<200
SKN	100	No	NA	NA	Coordinated	NA	Independent of CD4
SVA	67	Yes	No	NA	Coordinated	100	Independent of CD4
SUR	89	Yes	Yes	NA	Only in HIV	46	<200
TRT	100	Yes	No	19	Referred	12	200-350
URU	64	No	No	NA	Variable	NA	Independent of CD4
USA	89	Yes	No	0	Variable	31	Independent of CD4
VEN	82	No	NA	NA	Referred	32	200-350

NA: not available.

Highlighted cells show situations requiring special attention.

Factors that facilitate or limit the implementation of TB/HIV collaborative activities

The countries reported different factors that facilitate and limit the implementation of collaborative activities.

The political support, leadership and good communication between TB and HIV programs were identified as the key factors that mainly facilitate implementation. Other facilitating factors mentioned with less frequency included having attended a TB/HIV management course, having had pilot experiences before implementation, control activities on implementation, and having a unified electronic information system. **Table 9** summarizes the answers provided by the different countries.

On the other hand, factors that limited the implementation were: lack of qualified human resources; lack of a surveillance system capable of sharing information between programs, services and laboratories; absence of a formal coordinating body; and budgetary limitations for planning TB/HIV activities. Only one country mentioned other reasons: fear to work on HIV due to discrimination, logistical challenges to implement activities, political processes of decentralization that cause difficulty in implementing new programs, and lack of knowledge at the community level.

Table 9: Factors that influence the implementation of TB/HIV collaborative activities

Facilitating factors	N (%)
Coordinating body with political support	11 (31)
Good communication between program managers	9 (26)
Leadership of program managers	6 (17)
Joint planning of activities	5 (14)
Specific financial resources shared between the 2 programs	5 (14)
Awareness and training of human resources	5 (14)
Representation of both programs in the localities	4 (11)
Unique health system based on primary care	4 (11)
Guidelines and norms updated and consistent between both programs	4 (11)
Multidisciplinary team within the programs	4 (11)
Selection of a minimum set of shared indicators	3 (9)
National strategic plan and rules for its implementation	2 (6)
Shared logistical system for the distribution of drugs	2 (6)
Multi-sectoral coordination	2 (6)

Factors that limit the implementation	N (%)
Scarce or untrained human resources	10 (29)
Lack of an integrated surveillance or monitoring system	10 (29)
Lack of a formal coordinating body, or joint planning	9 (26)
Short budget for implementation	9 (26)
Lack of commitment or empowerment	7 (20)
Jurisdiction without a clear policy or without leadership for implementation	5 (14)
Lack of consistency between TB and HIV programs (rules or criteria)	5 (14)
Fragmented response to HIV and need to respond to multiple donors	4 (11)
Other priorities in public health	3 (9)
Resistance to implementation from medical specialists (TB or HIV)	3 (9)

Opportunities to promote research

Evident gaps need to be addressed to ensure the efficient provision of TB and HIV services in the region of the Americas. Operational research is defined as the study of strategies, interventions or tools that result in better quality, coverage, efficacy or efficiency of programs. At global level, situations have been identified in which TB/HIV activities can be supported through operational research [9].

In this survey, most of the countries have identified issues to be addressed with operational research. The majority of the issues reflect the need to improve patient retention, studies to validate epidemiologic data, and studies to explore barriers to implement prophylaxis with Isoniazid.

In total, 28 countries mentioned one or more priority issues that should be studied through operational research. These are listed in **table 11**.

Table 11: Topics of interest for operational research

Topic	N (%)
Prevalence and incidence studies (situation, evolution through time, TB drug resistance, geographic mapping)	9 (26)
Adherence studies (Situational studies, risk factors for poor adherence, enablers for good adherence, TB relapse)	8 (23)
Access to HIV testing (situation, identification of barriers, facilitators, advantages of availability of rapid tests)	7 (20)
INH prophylaxis (acceptability, impact, adherence, alternative schemes)	6 (17)
TB/HIV mortality (risk factors, tendencies, early ART)	5 (14)
Processes of implementation (barriers, enablers)	4 (11)
Epidemiologic analysis, monitoring and evaluation (socio-demographic characteristics, profiles, results from the programs)	4 (11)
Role of the PPD in LTBI, LTBI in prisons	4 (11)
Alternatives to TB screening in HIV (tests and algorithms)	3 (9)
Organization of services, flow of patients (barriers, enablers, integration)	3 (9)
CPT (impact on mortality, efficacy, adherence)	2 (6)
TB-HIV and other co-morbidities (diabetes, hepatitis, others)	2 (6)

Conclusions and Recommendations

Since the onset of the TB/HIV collaborative activities in 2004, countries have advanced with the implementation of these activities in the Americas. The conclusions and recommendations based on an analysis of the surveys' results, following the 3 objectives of the TB/HIV collaborative activities and other general aspects are presented below.

A. Establish the mechanisms for collaboration:

Most countries have coordinating bodies that have demonstrated to be a useful space to discuss policies and implementation plans to control TB/HIV co-infection. There are several coordinating mechanism models within the region, from formal organisms within the national administration (such as DOR), to others with no formal representation but with good functionality thanks to good communication between programs (for example, BRA or ARG). Most coordinating bodies are multidisciplinary, even though a large percentage lacks representation of key actors such as infection control instances and prisons' representatives. Specifically, it is still a challenge to include patients and civil society in these bodies. In some countries, targets and planning of activities are still not addressed jointly.

HIV surveillance in TB patients has now been implemented in all countries of the region, which constitutes significant progress with respect to 2008, when only 9/15 (60%) of the countries were conducting this activity.

Even though the number of TB/HIV internationally recommended indicators has been reduced to 13, the monitoring of TB/HIV collaborative activities has proven to be difficult in the region because most the countries do not have information systems capable of collecting all the necessary information, and only 20 of the 35 countries (57%) currently register the 3 priority indicators. The collection of information is also limited by other factors such as the low prevalence of co-infection in some countries, federal structures with autonomy to define monitoring indicators in some others, and the difficulty to integrate information systems between HIV and Tuberculosis programs.

Recommendations:

- Set-up a coordinating body in countries that still do not have one and might benefit from it ensuring the participation of different agencies involved in the control of TB/HIV at the national and sub-national levels, with particular emphasis on high co-infection burden countries (BAH, BLZ, CAN, COR, DOM, ECU, HAI, JAM, PER, SUR, URU), and maintaining and strengthening the existing ones.
- Continue monitoring routinely the prevalence of HIV in TB patients to facilitate surveillance of TB prevalence in people with HIV.
- Initiate and support joint planning of TB/HIV activities, particularly in countries where there is already a coordinating body but activities are not being planned jointly, clearly defining roles and responsibilities for TB and HIV control programs on implementation, expansion, monitoring and evaluation with a clearly defined budget.

- Develop TB/HIV joint in-service training programs and programs for health training schools, while providing continuous education based on the necessary skills for collaborative activities of all health personnel categories, in managerial and/or clinical aspects.
- Encourage the participation of NGOs and other civil society organizations and affected people in the implementation, monitoring and evaluation of the TB / HIV collaborative activities at all levels.
- Strengthen monitoring and evaluation of TB/HIV collaborative activities, ensuring at least the 3 priority indicators in countries that still do not report them (ARG, BOL, BRA, CAN, CHI, COL, DOM, DOR, ECU, HAI HON, STL, SKN, URU and USA)

B. Activities to reduce the burden of TB disease in people with HIV

The number of countries reporting TB screening in HIV patients is low (34%, 12/35) and the total number of individuals evaluated is still much lower (14,571 cases reported, while the estimated number of HIV in the Americas is 3 million people). Probably, these procedures are performed but not recorded. Most of the providers apply a clinical algorithm to guide the clinical suspicion of tuberculosis but this procedure is usually not recorded, or at least not reported to the programs. On the other hand, reporting all clinical screening of tuberculosis throughout the life of the individual at national and regional level might be a significant effort.

It is necessary to standardize the operational definition of screening for TB in a person with HIV according to the clinical algorithm recommended internationally and determine how to record this activity. Reporting the number of people clinically screened for tuberculosis at national and regional level might be difficult, as the possible finding of an active opportunistic disease is an activity that should be done in all clinical visits, which make it complex to define an adequate denominator.

Most countries (66%, 23/35) do not report individuals who are receiving INH prophylaxis. Among the 12 countries reporting INH prophylaxis, the total number is low (12,906 cases). The availability of PPD is frequently mentioned as a limitation for this activity. Currently, the WHO suggests that PPD should not be a requirement to initiate isoniazid prophylaxis in people with HIV due to operational difficulties involving its use. In people with HIV, clinical algorithms are sufficient to rule out active TB disease and anyone without symptoms and with unknown or positive PPD should receive prophylaxis. However, 2/3 of the countries in the region use PPD to initiate INH prophylaxis. Clearly, there is a need for TB and HIV programs to continue working on sensitizing and training health workers to rule out active TB infection in all HIV people and expand INH prophylaxis.

TB infection control in health facilities is done in almost all countries as part of overall infection control plans. Given the number of health workers who became ill from TB in 2010, TB transmission in health facilities is an important problem, which highlights the need to review the administrative and environmental control measures as well as the personal protection ones that constitutes TB infection control and that are currently being applied.

Recommendations:

- Promote the use of evidence-based clinical algorithms recommended by PAHO/WHO such as TB screening for people with HIV.
- Define the methodology, record procedure and frequency of TB screening for HIV patients.
- Review the criteria to prescribe IPT, particularly with respect to the use of PPD, promoting the adoption of WHO's new INH prophylaxis guidelines.
- Strengthen recording and reporting of HIV cases receiving INH to allow collection and reporting of this information (BAH, BAR, BLZ, BOL, BRA, CAN, CHI, COL, COR, DOM, ECU, GUT, JAM, MEX, PAN, PAR, STL, SKN, SVA, SUR, URU, USA)
- Develop a plan for TB infection control in countries that still do not have one and strengthen the implementation of control measures in all countries.

C. Activities to reduce the burden of HIV in TB patients

In the region of the Americas there is an important need to ensure the implementation of systematic offer of HIV testing to all TB patients. The progress of regional indicators related to this activity has been relatively moderate, from 35% in 2005 to 46% in 2010 [1]. Countries have recognized concrete difficulties that need to be addressed, such as the need to train and sensitize the human resources to increase the request for HIV testing, but also to reduce logistical barriers and access to the test. In this context, the implementation of rapid tests in TB treatment centers could solve some of these difficulties, particularly in large countries where not all regions have access to a laboratory or where it is difficult to establish a logistics system with adequate test distribution (e.g. ARG, CHI, URU and VEN). Conversely, it is possible that the incorporation of rapid HIV tests do not represent an additional advantage in countries where access is secured (as in COR or CUB) or where care is centralized in a few centers (e.g. BAH, BAR, SKN, STL). In some countries (e.g., ARG) information systems do not allow recording adequately the offer of HIV testing and results.

Prevention of HIV in TB patients is not recorded systematically, but all countries report that they perform these activities, particularly in the context of counseling offered with HIV testing. Only 29% (10/35) of the countries use the monitoring indicator that records the free availability of condoms in TB care centers.

The difficulty in recording also probably affects cotrimoxazol prophylaxis that most of the countries indicate and provide free of charge, although less than half report this indicator and only 6 report a coverage > 80% (BEL, DOM, ELS, GUA, HON, NIC).

With respect to comprehensive care, the models of service provision are variable and we cannot establish a relationship between the type of care (decentralized, centralized in HIV or TB centers) and the indicators of ART coverage. The choice of the model of care must be based on the organization of each district ensuring good communication between the two programs. Traditionally in the region, tuberculosis is treated in primary care centers while HIV care has been focused on a few national reference centers. Today, most countries are implementing decentralization of HIV care, which should

be seen as an opportunity to promote the integration of care services for TB/HIV co-infected patients by both programs. This also facilitates the follow-up by HIV services once tuberculosis has been treated.

Most countries have norms that indicate ART in TB patients regardless of CD4 cell count, however, the proportion of patients with TB and HIV receiving ART is greater than 80% only in 11 countries. On the other hand, CUB, DOR, GUY, HAI, MEX, PER and VEN show values of ART coverage in TB/HIV cases significantly lower than the national coverage of ART in HIV (**Annex 2**) while other countries show a significantly higher coverage in TB/HIV than in HIV population (BEL, BOL, BRA, ECU, GUT, HON, JAM and PAN). Some countries did not report the information of ART in TB patients (ARG, CHI, COR and URU).

The most frequently mentioned constraint to start early treatment was the difficulty in identifying HIV cases early on, followed by limitations in trained human resources, coordination and logistical difficulties, or refusal from patients.

Recommendations:

- Assure access for HIV tests through the strengthening of logistics and the implementation of rapid tests in TB services.
- Establish specific goals to increase the number of TB patients that are aware of their HIV status, especially in countries that do not report this indicator or that have very low coverage (e.g. ARG, BOL, CAN, CHI, COL, COR, DOM, MEX, PAR, PER).
- Revisit the models of care to ensure that they are comprehensive and that the patients have timely access to information and HIV prevention methods, TB and HIV diagnosis, prophylaxis, and ART in the same service or in a close coordination between services.
- Implement the WHO recommendation to provide ART to all TB/HIV patients regardless of their CD counts (ANB, BAR, CAN, DOM, GRE, MEX, NIC, PAR, STL, SUR and TRT)

D. General Aspects:

This survey has identified the implementation status of the TB/HIV collaborative activities in the region and country-specific gaps. In general terms, it is important to highlight the importance of political support for the implementation of these activities. In addition, the effective leadership of the managers of each program, and effective communication between them, has repeatedly been referred to be the most effective factors to promote joint planning of activities.

An important limitation for the programs is to identify specific funding for collaborative activities. In 75% of countries, TB and HIV programs have no information on funding available to implement these activities, which clearly complicates joint planning.

Regional meetings of TB and HIV program managers, and this survey, facilitated discussion processes at country level that favored the revision of the current situation in each country and the planning and implementation of activities in some of them. For example, in Colombia, it has allowed the development of a project for the implementation of plans for TB infection control in four referral hospitals, local training, revision of the TB co-infection guidelines and other materials, and implementation of HIV

testing in primary care centers, while in Panama, Haiti and Suriname the epidemiological surveillance formats have been revised and also specific training for health personnel and coordination meetings between the two programs have been carried out. This survey also allowed collecting information not routinely collected, such as health workers with TB and deaths of TB/HIV patients, which provide important information for the programs.

The regular collection of this information could help to establish trends and improve the quality of information and facilitate information exchange and communication between the regional programs, the country offices and TB and HIV programs of Member States to enhance the implementation of collaborative activities in the region.

Recommendations:

- Clearly define financing sources for the implementation of the collaborative activities during the planning and coordination process between HIV and TB programs, and find additional resources if necessary.
- Promote international forums for the exchange of information and experiences between countries regarding the implementation of collaborative activities.
- Continue evaluating the regional situation of the collaborative activities, such as conducting similar surveys every 3-5 years.

Update on interim policy regarding collaborative activities

At the beginning of 2012, the WHO published a document that reviews and updates the *Interim Policy on TB/HIV Collaborative Activities*, published in 2004. The review was based on the evidence derived from controlled random essays, observational studies, operational research, better programmatic implementation practices and new guidelines or recommendations about this topic [10].

The activities have remained similar, although some present changes in writing (**Table 10**). Contrary to the 2004 document, in the updated policy it is emphasized the need to provide integrated services for TB/HIV care according to the epidemiological characteristics and health programs of each country, and in coordination with the other health programs such as maternal and child health, damage reduction services, and penitentiary health services. In addition, it is recommended to establish local and national goals for TB/HIV collaborative activities through a participative process with the purpose to facilitate the implementation and achieve political commitment. Strong emphasis is made on achieving community and inter-sectorial participation in planning and monitoring. It is also recommended to systematically offer the HIV test to patients with a suspected or confirmed TB diagnosis and to their partners and family members with the objective of reducing the burden of HIV infection. Recent evidence on TB screening based on clinical algorithms is incorporated and early treatment of HIV in TB cases. Finally, it is proposed a local adaptation process that takes into consideration normative and programmatic decisions at national level with the purpose of finding the best program-management mechanisms for the country to offer integrated services for the TB and HIV care.

Table 10: Comparative chart of TB/HIV collaborative activities 2004 and 2012

Interim Policy 2004	Updated Policy 2012
A. Establish the mechanisms for collaboration	A. Establish and strengthen the mechanisms for delivering integrated TB and HIV services
A.1 Set up a coordinating body for TB/HIV activities effective at all levels	A.1. Set up and strengthen a coordinating body for collaborative TB/HIV activities functional at all levels
A.2 Conduct surveillance of HIV prevalence among tuberculosis patients	A.2. Determine HIV prevalence among TB patients and TB prevalence among people living with HIV
A.3 Carry out joint TB/HIV planning	A.3. Carry out joint TB/HIV planning to integrate the delivery of TB and HIV services
A.4 Conduct monitoring and evaluation	A.4. Monitor and evaluate collaborative TB/HIV activities
B. Decrease the burden of tuberculosis in people living with HIV/AIDS	B. Reduce the burden of TB in people living with HIV and initiate early antiretroviral therapy
B.1 Establish intensified tuberculosis case-finding	B.1. Intensify TB case-finding and ensure high quality antituberculosis treatment
B.2 Introduce isoniazid preventive therapy	B.2. Initiate TB prevention with Isoniazid preventive therapy and early antiretroviral therapy
B.3 Ensure tuberculosis infection control in health care and congregate settings	B.3. Ensure control of TB infection in health-care facilities and congregate settings
C. Decrease the burden of HIV in tuberculosis patients	C. Reduce the burden of HIV in patients with presumptive and diagnosed TB

C.1 Provide HIV testing and counseling	C.1. Provide HIV testing and counseling to patients with presumptive and diagnosed TB
C.2 Introduce HIV prevention methods	C.2. Provide HIV prevention interventions for patients with presumptive and diagnosed TB
C.3 Introduce co-trimoxazole preventive therapy	C.3. Provide co-trimoxazole therapy for TB patients living with HIV
C.4 Ensure HIV/AIDS care and support	C.4. Ensure HIV prevention interventions, treatment and care for TB patients living with HIV
C.5 Introduce antiretroviral therapy	C.5. Provide antiretroviral therapy for TB patients living with HIV

The fundamental goal of this adaptation is the expansion of national coverage for TB/HIV collaborative activities with the purpose of reducing mortality and morbidity caused by TB and related to HIV, according to the epidemiological features of both diseases, and with a comprehensive approach focus on integrated health services.

It is expected that the 2012 revision of this document on TB/HIV collaborative activities will guide TB/HIV national programs in their efforts to keep expanding these activities in order to include all patients with presumptive or confirmed TB diagnosis in an integrated approach.

References:

1. WHO's global TB database. <http://www.who.int/tb/country/data/download/en/index.html>.
2. WHO, UNAIDS, and UNICEF, (WHO, UNAIDS, UNICEF; Global HIV/AIDS response: epidemic update and health sector progress towards universal access: progress report. http://www.who.int/hiv/pub/progress_report2011/en/index.html. 2011.
3. UNAIDS, Report on the global AIDS epidemic. http://www.unaids.org/globalreport/global_report.htm. 2010.
4. OPS. Oferta y realización del Test de VIH en pacientes con TBC. Situación actual en los pacientes con Tuberculosis de los establecimientos más grandes del país. Argentina 2011, <http://publicaciones.ops.org.ar/publicaciones/otras%20pub/TBVIH.pdf>. 2011.
5. WHO, Interim Policy on Collaborative TB/HIV Activities. http://whqlibdoc.who.int/hq/2004/who_hm_tb_2004.330.pdf. 2004.
6. WHO, Guidelines for intensified tuberculosis case-finding and isoniazid preventive therapy for people living with HIV in resource-constrained settings. http://www.who.int/tb/challenges/hiv/ICF_IPTguidelines/en/index.html. 2011.
7. WHO, Policy on TB Infection Control in Health-Care Facilities, Congregate Settings and Households. http://whqlibdoc.who.int/publications/2009/9789241598323_eng.pdf. 2009.
8. OPS, Coinfección TB/VIH: Guía Clínica. http://new.paho.org/hq/dmdocuments/2011/Coinfeccion_TB-VIH_Guia_Clinica_TB.pdf. 2010.
9. WHO, Priority research questions for TB/HIV in HIV-prevalent and resource-limited settings. http://whqlibdocho.int/publications/2010/9789241500302_eng.pdf. 2010.
10. WHO, Policy on collaborative TB/HIV activities: Guidelines for national programmes and other stakeholders. 2012.

Annex 1: Survey Format

Survey on TB/HIV Collaborative Activities in the Region of The Americas		
Rationale		
<p>The objective of this survey is to ascertain the level of progress in the implementation of TB/HIV collaborative activities in the Region of the Americas. The emphasis will be on identifying the extent of collaboration between TB and HIV Programs at the national and sub-national levels and the degree of integration of services at the peripheral level. The information is needed to assess progress made towards accelerating the implementation of TB/HIV Collaborative activities and identify the current challenges.</p>		
<p>Instructions: This form should be filled by the NTP and HIV Manager or their respective delegate. The data will be later consolidated and analyzed in detail at the regional level, and the results shared with the country. Its analysis during the group work will provide the basis for determining next steps and the country commitments on TB/HIV. We appreciate your co-operation.</p>		
Country:		
Name and post of persons filling out the form.	National TB Program	National HIV Program
	Name: Post:	Name: Post:
E-Mail:		
Telephone: <i>(including area code)</i>		
Date:		

For each of the following questions please circle the appropriate response. In several questions more than one answer is possible.

TB/HIV Collaborative Activities

ID	Question	Comments
1	<p>Is there a national TB/HIV coordinating body?</p> <p>1. Yes 2. If no continue to question 4</p> <p>If so, how long has the TB/HIV coordinating body been in existence? Please specify</p>	
2	<p>How often does the national TB/HIV coordinating body meet?</p> <p>1. Every quarter 2. Every 6 months 3. Yearly 4. Other (Specify).....</p>	

3	<p>What is the composition of the national coordinating body? (circle all that apply)</p> <ol style="list-style-type: none"> 1. NTP Program Manager 2. HIV Program Manager 3. TB/HIV Coordinator 4. Drug management official 5. Information system manager 6. Infection control official 7. Patient representatives 8. Civil Society Representatives 9. Academia Representative 10. Ministry of Justice Officials 11. Substance Abuse Representative 12. Other (Specify)..... 	
4	<p>Is there a TB/HIV coordinating body at the sub national level?</p> <ol style="list-style-type: none"> 1. Yes 2. No <p>If so, at which level?</p> <ol style="list-style-type: none"> 1. Regional 2. Municipal/District 3. Other 	
5	<p>What is the composition of the TB/HIV coordinating body at this level? (circle all that apply)</p> <ol style="list-style-type: none"> 1. TB program manager 2. HIV program officer 3. TB/HIV Coordinator 4. Civil Society representative 5. Other 	
6	<p>What is the approach to TB/HIV planning?</p> <ol style="list-style-type: none"> 1. TB/HIV collaborative activities are reflected in the national strategic plan of the HIV and TB program 2. There is a joint national TB/HIV plan 3. TB/HIV planning are done independently by each program 4. TB/HIV planning is done jointly in the absence of a plan 5. There is no TB/HIV planning 6. Other (specify) 7. 	
7	<p>a) What is the total <u>TB</u> budget allocated to TB/HIV activities in US\$? Amount US\$.....</p> <p>b) What is the percentage of the TB Budget that is allocated to TB/HIV activities? Percentage.....</p>	
8	<p>a) What is the total <u>HIV</u> budget allocated to TB/HIV activities in US\$? Amount US\$.....</p> <p>b) What is the percentage of the HIV Budget that is allocated to TB/HIV activities? Percentage.....</p>	

9	<p>What type of TB/HIV guidelines does the country have?</p> <ol style="list-style-type: none"> 1. Clinical 2. Programmatic 3. Both 4. None 5. Other (specify) 	
10	<p>How are the TB/HIV clinical guidelines stipulated?</p> <ol style="list-style-type: none"> 1. There is a TB/HIV component in the TB guidelines 2. There is a TB/HIV component in the HIV guidelines 3. There is a joint national TB/HIV guideline following PAHO's TB/HIV clinical guidelines. 4. There is a national TB/HIV guideline developed in country but not following PAHO's clinical guidelines 5. There are no TB/HIV guidelines 6. Other (specify)..... 	
11	<p>How is the training and updating of health care workers on TB/HIV activities conducted?</p> <ol style="list-style-type: none"> 1. TB/HIV training and updating are done jointly by both programs. 2. TB/HIV training and updating are done independently in each program 3. There is no training and updating provided on TB/HIV activities. 4. Other (specify) 	
12	<p>What type of TB/HIV training is conducted?</p> <ol style="list-style-type: none"> 1. Managerial 2. Clinical 3. HIV counseling for TB patients 4. Other (specify) 	
13	<p>What is the average training course duration?</p> <ol style="list-style-type: none"> 1. 1 day 2. 2-3 days 3. 1 week 4. 2 weeks 5. Other 	
14	<p>What are the main sources of materials used in training courses ?</p> <ol style="list-style-type: none"> 1. PAHO/WHO 2. Own 3. Partners (specify) 4. Other(specify) 	
15	<p>Where can one identify plans for Advocacy, Communication and Social Mobilization (ACSM) and Information, Education and Communication (IEC) for TB/HIV?</p> <ol style="list-style-type: none"> 1. Within individual national ACSM and IEC strategic plans 2. Within the joint TB/HIV strategic plan 3. As separate components of either national TB or HIV strategic plans. 4. There are no plans for ACSM or IEC 	

16	<p>How is the implementation of Advocacy, Communication and Social Mobilization for TB/HIV carried out?</p> <ol style="list-style-type: none"> 1. ACSM activities for TB/HIV are performed jointly by both TB and HIV programs 2. ACSM activities for TB/HIV are done independently by each program. 3. Joint co-operation on ACSM activities involving the TB and HIV program includes private partners such as NGO's 4. ACSM activities for TB/HIV have not yet been developed. 5. Other (specify) 	
17	<p>How are community groups involved in TB/HIV activities?</p> <ol style="list-style-type: none"> 1. TB and HIV programs work jointly with community groups in TB/HIV planning and implementation. 2. TB/HIV activities are conducted by community groups with the joint assistance of TB and HIV programs. 3. TB/HIV activities are conducted by community groups with the assistance of either the TB or HIV program 4. Community participation has not been significant in implementing TB/HIV activities. 5. Other (specify) 	
18	<p>What are the priority issues for TB/HIV operational research in the country? Please, list:</p>	
19	<p>How are the TB and HIV patient monitoring systems designed?</p> <ol style="list-style-type: none"> 1. The TB and HIV records and registers are interlinked through an electronic-based system. 2. The registers of the TB and HIV programs are not electronically linked but each has national indicators for joint planning. 3. The registers of the TB and HIV program are not electronically linked but each have some of the 13 WHO indicators for collaborative activities. 4. The patient monitoring systems of the TB and HIV programs are not linked in any way. 5. Other (specify) 	
20	<p>With regards to TB/ HIV records and registers. A) In the TB program registers, which of the following information is present? (circle all that apply)</p> <ol style="list-style-type: none"> 1. Patient offered an HIV test 2. Patient tested for HIV 3. Results of HIV Test 4. ART status of HIV positive TB patient 5. Date of initiation of ART 6. Patient on co-trimoxazole therapy 7. Patient referred to HIV program 8. Other (specify) 	

	<p>B) In the HIV program register, which of the following information is present? (circle all that apply)</p> <ol style="list-style-type: none"> 1. Person considered a TB suspect 2. Person screened for TB 3. Person has active TB 4. Person is currently on IPT. 5. Person in on ART 6. Person has been referred to the TB program 7. Patient is on CPT 8. Patient died of TB 9. Other (specify) 	
21	<p>Please list the main indicators used to monitor TB/HIV activities implementation</p>	
22	<p>How is HIV people with newly diagnosed TB managed?</p> <ol style="list-style-type: none"> 1. They are referred to the TB Program 2. They are treated at HIV services in co-ordination with the TB program 3. They are treated at HIV services alone 4. Other (specify) 	
23	<p>What are the main tools used to rule out TB in an HIV patient?</p> <ol style="list-style-type: none"> 1. Symptom-based clinical algorithm 2. Sputum smear microscopy 3. Tuberculin Test (PPD) 4. Chest X-Ray 5. Culture (solid or liquid) 6. Xpert MTB-RIF 7. Other (specify) 	
24	<p>a. In which document is the provision of IPT for HIV patients outlined?</p> <ol style="list-style-type: none"> 1. In the national TB guidelines 2. As part of the National HIV guidelines 3. In the joint TB/HIV guidelines 4. No official guideline exists 	
	<p>b. Outline some of the difficulties involved in providing INH preventative therapy for HIV patients</p>	
25	<p>Has the recommendations of IPT been updated according to the latest evidence and WHO's TB intensified case finding and IPT guidelines of 2010?</p> <ol style="list-style-type: none"> 1. Yes 2. No 	
26	<p>How are the procurement, supply and distribution of Isoniazid for HIV patients done?</p> <ol style="list-style-type: none"> 1. Independently through the HIV program 2. In coordination with the TB program 3. Other (specify) 	

27	<p>What is the basis for infection control in health care facilities and congregate settings?</p> <ol style="list-style-type: none"> 1. A national policy on infection control not limited to TB and HIV. 2. A national plan for TB and TB/HIV infection control. 3. National guidelines on TB or TB/HIV infection control. 4. Institutional plan or guidelines (health care facilities and congregate settings) 5. No specific plans for TB or TB/HIV infection control exists. 	
28	<p>How many health care workers have developed TB in 2010?</p>	
29	<p>Does the country use PAHO's guidelines for counseling and testing of HIV in TB patients?</p> <ol style="list-style-type: none"> 1. Yes 2. No 	
30	<p>What are some of the barriers to HIV testing in TB patients in your country? Please list.....</p>	
31	<p>Which is the initial method of diagnosis for HIV testing?</p> <ol style="list-style-type: none"> 1. Rapid test. 2. Elisa 	
32	<p>In which document is the provision of CPT for TB/HIV patients outlined?</p> <ol style="list-style-type: none"> 1. TB guidelines 2. HIV guidelines 3. Joint TB/HIV guidelines 4. It is not included in any of the abovementioned guidelines 5. Other(specify) 	
33	<p>How is CPT provided?</p> <ol style="list-style-type: none"> 1. It is provided free of charge at the HIV Program 2. It is provided free of charge at the TB Program 3. It is provided in the form of a prescription for private purchase at either the TB or HIV program. 4. Other (specify) 	
34	<p>In which document is the provision of ART treatment stipulated?</p> <ol style="list-style-type: none"> 1. National HIV guidelines 2. National TB/HIV guidelines 3. National TB guidelines 4. Other(specify) 	
35	<p>What are some of the barriers currently present to early initiation of ART in TB/HIV patients? Please list....</p>	

36	<p>What is the criterion used for the initiation of ART in TB/HIV patients?</p> <ol style="list-style-type: none"> 1. Patients with CD4 below 200 cells/ml 2. Patients with CD4 below 350 cells/ml 3. All TB/HIV patients are started on antiretroviral therapy regardless of CD4 count 4. Other (specify) 	
37	<p>a. Where do TB/HIV positive patients receive ART treatment?</p> <ol style="list-style-type: none"> 1. They are treated with ART in the TB program 2. They are referred to the HIV program for treatment 3. They are treated jointly by both TB and HIV physicians at a specialized clinic (integrated) 4. Other (specify) 	
	<p>b. Where do TB/HIV positive patients receive TB treatment?</p> <ol style="list-style-type: none"> 1. They are treated with anti-tuberculosis therapy within the HIV program 2. They are referred to the TB program for treatment 3. They are treated jointly by both TB and HIV personnel at a specialized (integrated) clinic 4. Other (specify) 	
38	<p>What form of support is given to an HIV-positive TB patient?</p> <ol style="list-style-type: none"> 1. HIV adherence counseling 2. Community services 3. Patient support 4. Peer-group support 5. Psychological Support 6. None of the above 7. Other (specify) 	
39	<p>Which of the following groups are provided TB/HIV preventive services?</p> <ol style="list-style-type: none"> 1. Pregnant mothers and children 2. Substance abusers (smokers, alcohol and IV drug users.) 3. Men having Sex with Men 4. People with Sexually Transmitted Diseases 5. Prisoners 6. Mentally challenged 7. Youth and Adolescents 8. Health care workers 9. Diabetics 10. Indigenous populations 11. Others 	

TB/HIV Data

Variables	Year 2010
<ul style="list-style-type: none">• New notified PLWHA with TB (all forms)	
<ul style="list-style-type: none">• New notified PLWHA who died of TB	
<ul style="list-style-type: none">• Total notified number of TB/HIV patients registered in HIV Program	
In the TB program (notified)	
<ul style="list-style-type: none">• Total number of TB/HIV patients Male	
<ul style="list-style-type: none">• Total number of TB/HIV patients Female	
<ul style="list-style-type: none">• Total number of TB/HIV patients by age group	
<ul style="list-style-type: none"><ul style="list-style-type: none">▪ < 5yrs	
<ul style="list-style-type: none"><ul style="list-style-type: none">▪ 5-14 yrs.	
<ul style="list-style-type: none"><ul style="list-style-type: none">▪ >15 yrs.	

Comments and suggestions

Based in your country experience, please state the main factors that contribute to successful collaboration between TB and HIV
Based in your country experience, please state the main limitations or obstacles to successful collaboration between TB and HIV
Recommendations to improve coordination between the TB and HIV Programs

Thank you!

Monitoring of TB/HIV collaborative activities

Indicators

Instructions: Please fill out the table below with the requested information for each of the TB/HIV listed indicators (Those in bold are the priority indicators).

Indicator	It is collected	Source	It is not collected	Will it be collected and analyzed in 2011-2012?	Comments
B.1.1: Percentage of HIV-positive patients who were screened for TB in HIV care or treatment settings					
B.1.2.1: Percentage of HIV-positive patients who received TB treatment					
B.1.2.2: (UNGASS core indicator 6) Percentage of estimated HIV-positive incident TB cases that received treatment for TB and HIV					
B.2.1: Percentage of new HIV-positive patients starting IPT during the reporting period					
B.3.1: Proportion of health-care facilities providing services for people living with HIV that have infection control practices that include TB control					
B.3.2: Proportion of health-care workers, employed in facilities providing care for people living with HIV, who developed TB during the reporting period					

Indicator	It is collected	Source	It is not collected	Will it be collected and analyzed in 2011-2012?	Comments
C.1.1: Proportion of TB patients with known HIV status					
C.1.2.1: Proportion of all registered TB patients who had documented HIV status recorded who are HIV-positive					
C.1.2.2: Case-detection rate of TB patients with documented HIV-positive status					
C.2.1: Availability of free condoms at TB services					
C.3.1: Proportion of HIV-positive TB patients who receive CPT					
C.4.1: Proportion of HIV-positive TB patients enrolled in HIV care services during TB treatment					
C.5.1: Proportion of HIV-positive registered TB patients given ART during TB treatment					

Annex 2: TB/HIV programmatic and epidemiological data

Country	Country population (WHO)	Estimated incident TB cases (WHO)	Estimated TB incidence/100,000 (WHO)	Reported TB cases in 2010 (WHO)	TB deaths not HIV (estimated) (WHO)
ANB	88,710	4.4	4.9	6	0.38
ARG	40,412,376	11,000	27	7,287	770
BAH	342,877	39	11	31	3
BAR	273,331	4.6	1.7	6	0.65
BLZ	311,627	120	40	145	15
BOL	9,929,849	13,000	135	8,345	1,900
BRA	194,946,470	85,000	43	74,395	5,000
CAN	34,016,593	1,600	4.7	1,322	78
CHI	17,113,688	3,200	19	2,376	280
COL	46,294,841	16,000	34	11,420	1,300
COR	4,658,887	630	13	490	52
CUB	11,257,979	1,000	9.3	827	32
DOM	67,757	8.9	13	8	2.3
DOR	9,927,320	6,700	67	3,964	810
ECU	14,464,739	9,400	65	4,832	970
ELS	6,192,993	1,800	28	1,700	57
GRE	104,487	4.3	4.1	4	0.35
GUA	14,388,929	8,900	62	3,322	560
GUY	754,493	840	111	712	97
HAI	9,993,247	23,000	230	14,222	2,900
HON	7,600,524	3,900	51	2,876	390
JAM	2,741,052	180	6.6	130	16
MEX	113,423,047	18,000	16	19,570	960
NIC	5,788,163	2,400	42	2,448	150
PAN	3,516,820	1,700	48	1,496	300
PAR	6,454,548	3,000	46	2,277	270
PER	29,076,512	31,000	106	31,073	1,800
SKN	52,402	4	7.6	2	2.4
STL	174,267	14	7.9	9	3.1
SVA	109,333	27	24	15	2.1
SUR	524,636	760	145	194	15
TRT	1,341,465	250	19	219	37
USA	310,383,948	13,000	4.1	11,181	550
URU	3,368,786	720	21	699	36
VEN	28,979,857	9,700	33	6,335	820

Country	Number of individuals who were offered an HIV test (WHO)	Number of individuals with positive HIV test (WHO)	% of positive HIV tests in TB patients (WHO)	TB/HIV cases that received CPT (WHO)	TB/HIV cases that received ART (WHO)	HIV cases evaluated for TB (WHO)	HIV cases that received IPT (WHO)
ANB	6	5	83	1	5	0	0
ARG	1,008	566	56	NA	NA	NA	NA
BAH	32	15	47	4	10	NA	NA
BAR	6	2	33	0	2	5	NA
BLZ	143	29	20	29	29	NA	NA
BOL	2,003	140	7	0	113	NA	NA
BRA	37,210	8,558	23	NA	7,948	NA	NA
CAN	382	23	6	NA	NA	NA	NA
CHI	NA	NA	0	NA	NA	NA	NA
COL	5,079	1,231	24	NA	433	NA	NA
COR	NA	NA	NA	NA	NA	NA	NA
CUB	862	53	6	0	35	NA	1,366
DOM	3	1	33	1	1	NA	NA
DOR	2,489	547	22	43	21	5,041	5,041
ECU	3,379	427	13	NA	427	390	NA
ELS	1,667	180	11	147	113	292	455
GRE	4	1	25	0	0	23	0
GUA	2,103	325	15	325	325	24	NA
GUY	734	209	28	160	124	843	144
HAI	9,518	1,892	20	253	185	6,154	4,112
HON	1,557	201	13	180	180	390	27
JAM	128	29	23	NA	29	NA	NA
MEX	8,842	1,189	13	1189	424	NA	NA
NIC	1,445	60	4	40	40	761	465
PAN	1,337	213	16	137	141	NA	NA
PAR	777	138	18	0	96	NA	NA
PER	9,539	853	9	NA	89	NA	1,183
SKN	2	0	0	0	0	NA	NA
STL	9	0	0	0	0	NA	NA
SVA	10	3	30	NA	3	NA	NA
SUR	173	58	34	NA	26	NA	NA
TRT	254	58	23	11	7	648	11
USA	7,107	612	9	NA	NA	NA	NA
URU	620	103	17	0	32	NA	NA
VEN	5,213	479	9	NA	156	NA	102

NA: Not available

Country	Estimated number of people with HIV (UNAIDS 2009)	Minimum estimated number of new HIV infections (UNAIDS 2009)	Maximum estimated number of new HIV infections (UNAIDS 2009)	New ART initiations (Universal Access report, WHO, 2010)	Health workers with TB in 2010 (PAHO survey)
ANB	500	NA	NA	56	0
ARG	110,000	4,100	11,000	498	NA
BAH	6,600	199	1,200	NA	1
BAR	2,100	199	499	47	0
BLZ	4,800	499	999	335	2
BOL	12,000	999	1,600	790	30
BRA	630,000	18,000	70,000	39,376	NA
CAN	68,000	2,300	4,300	NA	NA
CHI	40,000	1,400	4,300	1,568	2
COL	160,000	2,800	16,000	13,501	NA
COR	9,800	499	1,100	201	1
CUB	7,100	499	999	1,065	14
DOM	500	NA	NA	3	0
DOR	57,000	1,600	5,000	3,297	NA
ECU	37,000	1,100	6,200	1,805	5
ELS	34,000	1,200	4000	1,393	4
GRE	1,000	NA	NA	13	0
GUA	62,000	3,600	11,000	1,059	4
GUY	5,900	99	999	499	2
HAI	120,000	6,500	11,000	6,093	NA
HON	39,000	999	3,700	1,240	10
JAM	4,200	2,100	999	1,030	2
MEX	220,000	8,800	21,000	8,462	179
NIC	6,900	499	1,300	452	NA
PAN	20,000	999	2,200	425	14
PAR	13,000	999	1,600	786	5
PER	75,000	2,300	6,700	1,544	300
SKN	500	NA	NA	NA	0
STL	1,500	NA	NA	NA	0
SVA	1,000	NA	NA	NA	0
SUR	3,700	99	499	235	NA
TRT	15,000	999	1,800	977	0
USA	1,200,000	24,000	110,000	NA	432
URU	9,900	499	999	210	18
VEN	110,000	NA	NA	5,525	42

NA: Not available