"STRENGTHENING DOTS STRATEGY IN METROPOLITAN REGIONS WITH HIGH TUBERCULOSIS BURDEN IN BRAZIL"

The activities comprised by the present report fall within the scope of the Global Fund Tuberculosis Brazil Program, submitted to The Global Fund in 2003, with non-refundable resources released as from May 2007. The total funding originally approved was **US$ 27,400,000** (twenty seven million and four hundred thousand dollars), was destined to the implementation of actions of control of both Tuberculosis and TB/HIV co-infection, in 10 metropolitan regions and in the City of Manaus, areas with higher disease incidence, which together may respond for approximately 45% of new cases of TB per year.

This report refers only to Objectives 3 and 4, respectively, "Strengthening Laboratory Network by Improving Quality Assurance" and "Strengthening the Actions Aimed at Reducing TB/HIV Co-infection", developed under the responsibility of Fundação Ataulpho de Paiva (FAP).

1. INTRODUCTION

This Program was developed in a worrying scenario, in which Brazil occupies the 16th position in the ranking of the 22 countries, responsible for 80% of all cases of tuberculosis around the world.

By that time, the prevalence estimated was of 50 million persons infected. According to the National Diseases Report System – Sinan – about 80 thousand new cases were notified annually in Brazil, corresponding to an incidence coefficient of 47/ 100,000 inhabitants. The mortality rate due to tuberculosis – a treatable disease – was of 3.6 deaths for 100,000 inhabitants.

Another reason for concern was the TB/HIV co-infection rate, as MoH estimates, around 10% of patients with TB were also infected by HIV, being TB the main cause of death among patients with AIDS.

Every day, tuberculosis continues to move forward, especially in the most vulnerable segments of the population, strongly growing in the suburbs, poverty

pocket strongholds, among street population, prisoners and people living with HIV/AIDS.

The International targets established by WHO and agreed by the Brazilian government are to trace 70% of the estimated cases of tuberculosis and cure 85% of those. Hence, there is a great investment in training the Community Agents of Health (ACS) as well as in DOTS expansion for the basic care services, which is a government priority. To spread the scope of supervised treatment for 315 priority cities, to provide outcome information of 100% of the diagnosed cases, to offer anti-HIV testing for 100% of adults with TB and reduce abandonment to less than 5% were the main goals established by the **National Tuberculosis Control Program (NTCP).**

Therefore, the expansion of TS-DOTS (Directly Observed Treatment Strategy, Short-Course Therapy), the control of TB/HIV co-infection, implementation of chemoprophylaxis so that HIV/aids patients may prevent tuberculosis, control of multi-resistant tuberculosis (TB-MR) and the support to the promotion of researches, are some of the strategies defined by NTCP for the control of tuberculosis.

In line with said strategies, the Global Fund TB Brazil Program comprised 4 Objectives, being FUNDAÇÃO ATAULPHO DE PAIVA responsible for the implementation of Objectives 3 and 4, respectively:

- **Objective #3: Strengthening laboratory network by improving quality assurance**

- **Objective 4: Strengthening the actions aimed at reducing TB/HIV co-infection based on lessons learned**

However, it is up to us, to present a brief history of this Program, in order to clarify to those who did not succeeded to follow up the exhaustive, however restless, journey that brought us here, today, before this agency – undeniable representative of the Brazilian society as a whole – whose existence is a result of this same journey. And, if for no other reason, due to the contribution of such scope of representation of the Brazilian society, which would be by itself an accomplishment of great magnitude.

2. SUMMARY OF THE GLOBAL FUND TB BRAZIL PROGRAM

The Global Fund to Fight Against, AIDS, Tuberculosis and Malaria (The Global Fund), headquartered in Geneva, is an institution dedicated to support actions of control of such diseases, in countries most affected by them, from the national proposals submitted by the respective governments, along with institutions representing the organized civil society.

Since 2003, Brazil had been trying its insertion as a beneficiary of The Global Fund, in order to obtain subsides destined to support actions to control tuberculosis.

These attempts were always facing some obstacle, due to Brazil's privileged economic condition before other countries which were also candidates to receive the Fund's subsides, as well as because of some requirements imposed by the Global Fund, the most significant being the constitution of an instance – the Country Coordinating Mechanism (CCM) – to act as a responsible for the set of actions able to receive the subsides. CCM composition should foresee the participation, in addition to government institutions, of representatives of institutions from the organized civil society.

In 2005, during the 5th Round, Brazil submitted the proposal prepared the year before by the Brazilian Committee to The Global Fund. Institutions from the organized civil society and the government took part on it, originating the Country Coordinating Mechanism (CCM), comprised by 23 institutions including government, civil society, academy, representatives of affected people and international agencies, among others. The role of the Ministry of Health and of Pan-American Health Organization (PAHO) to prepare the proposal was crucial in that moment.

The Brazilian Program, approved on that fifth round of negotiations of The Global Fund, while it foresaw the acceleration of achieving the goals established for the National TB Control Program (NTCP), also proposed to implement new activities which could contribute to improve treatment under DOTS, with the subsequent decrease of the incidence, prevalence, and mortality due to tuberculosis (TB).

These activities included a broad programming of professional qualification, and decentralization of treatment supervision, always with the participation of civil society institutions.

Metropolitan regions covered by the Program were Belem, Sao Luis, Fortaleza, Recife, Salvador, Rio de Janeiro, Belo Horizonte, São Paulo, Baixada Santista, Porto Alegre and the city of Manaus, comprising 57 priority municipalities, which respond for 45% of the country's total cases of TB (list of cities in ATTACHMENT 1).

The approved Program was foreseeing to Brazil, non-refundable contribution of resources in the amount of US$ 5,163,636 to support actions of Tuberculosis control developed by Fundação Ataulpho de Paiva (objectives 3 and 4) in 5 years, as from May 1, 2007, however the total effectively disbursed was US$4,079,488 until this date.

The Global Fund TB-Brazil Program was based upon 4 main Objectives:

Objective #1: Strengthening DOTS Strategy for early diagnosis and timely treatment among vulnerable populations, through training, identification of infectious cases, and incentive to the supervised treatment. Activities of monitoring and evaluation of the Program are foreseen within the scope of the Objective.

Objective #2: Strengthening of social mobilization, behavior change communication, and information, education and communication activities and advocacy, through teaching and research, and operative investigations;

Objective #3: Strengthening the TB laboratory network by improving quality assurance and a laboratory information system by training laboratory staff and carrying out monitoring and evaluation routines;

Objective #4: Strengthening the actions aimed at reducing TB/HIV based on lessons learned, by improving timely detection and a quality treatment for people living with Tuberculosis and HIV/AIDS.

Implementation of Objectives #1 and #2 was under the responsibility of **Fundação para o Desenvolvimento Científico e Tecnológico em Saúde (FIOTEC)** and Objectives #3 and #4, detailed below, scope of this report, under the responsibility of **Fundação Ataulpho de Paiva (FAP).**

3. SCHEDULED ACTIVITIES – OBJECTIVES #3 & #4

Objective #3 – To strength the Laboratory Network of TB by Improving a Quality Assurance Program

Service Area 1 – Training of the technical team, acting in the units of TB laboratory chain, in the activities to control the laboratory quality assurance and monitoring of the chain in order to assure the effective implantation of such control procedures.

Activity 1 – Production, printing, and distribution of laboratory manuals;

Activities 2 and 3 – Workshops to train multipliers in laboratory routines and in applying the TB laboratory information system.

Activity 4 – Workshops to train monitors of quality control.

Activity 5 – Hiring of Monitors for implantation of the information and the control of laboratory quality assurance system;

Activities 6 and 7 – Conduction of supervisions to the units of TB laboratory chain.

Activity 8 – Annual meeting for evaluation.

Activity 9 – Hiring of Consultancies for the Program of Laboratory Quality Assurance and for the Information System.

Service Area 2 –

Activity 1 – Construction of a laboratory information system for TB

Objective 4 – To strength the decrease actions of TB/HIV co-infection based on the lessons learned

Service Area 1 – Timely detection and quality treatment for people living with tuberculosis and HIV/AIDS.

Activities 1, 2, 3, and 5 – Workshops for creation of a Plan of Action and of the reference system structure for cases of TB/HIV co-infection; for the creation of advisory committees and for the training of multipliers in consultancy and testing for HIV in the units of TB, and of TB and TBMR in HIV units;

Activities 4, 6, and 7 – Supervision of service professionals when performing new activities of TB/HIV;

Service Area 2 – Information, Education, and Communication.

Activities 1, 2, and 3 – Creation and production of 30 thousand manuals, 50 thousand leaflets, and 20 thousand posters on TB/HIV co-infection.

Service Area 3 – Strengthening of the Civil Society:

Activity 1 – Workshops with Organizations from the Civil Society for creation of plans of action to prioritize control action for TB/HIV co-infection;

Activity 2 – Creation of Public Notices for collection of Programs to be developed by Non Governmental Organizations (NGO), aiming the performance of control actions against TB/HIV co-infection in the community;

Activity 3 – Hiring of Consultancy for the creation of selection criteria and monitoring of such Programs.

4. INITIAL STRATEGY FOR THE PROGRAM DEVELOPMENT

The Global Fund TB Brazil Program was meant on a four axis basis: The first one was seeking more participation from the civil society and full integration of all government actors; the second one, education/capacity building for both health professionals and member of the civil society; the third one, information, by improving quality of data and reducing the time for data input; and the fourth one, the support to innovative actions. From the four objectives of the GF-TB Program, this report contemplates 3 and 4, which were implemented by FAP.

4.1 Regional workshops

As an initial strategy for the Program implantation, regional workshops were held, with the participation of state and city coordinators of TB Programs, state and city coordinators of STD/AIDS Programs, directors of State Central Laboratory – LACEN, people in charge for the Information System on the State level, and representatives of the civil society in the several metropolitan regions covered by the Program Global Fund. These regional workshops were held in Belém, Recife,

Rio de Janeiro, Santos, São Paulo, and Porto Alegre, from May to July 2007, and their purposes were:

To present the Program approved by Global Fund for the period of 2007-2012 in all its scope;

2) To structure the Metropolitan Committee that would be responsible to make the proposal politically and operationally viable;

3) To describe and discuss the organization of TB services in the metropolitan region emphasizing strengths and weaknesses;

4) To describe and discuss the structure of the care services network for TB/HIV co-infection;

5) To plan the development strategies of the Program in metropolitan regions.

These workshops showed to be of great importance as a socialization tool of information regarding the care of TB and HIV, not only among the two programs of STD/AIDS and TB (City and State), but also among the representatives of civil society, equipping them for a more effective participation in the discussions on innovative strategies to be implanted for TB control and TB/HIV co-infection.

Action plans were created in conjunction by PCT, AIDS Program, civil society, LACEN representatives, etc. The survey of epidemiological and operational information obtained through the document "Diagnostic of the Current Status", sent to the cities in the preparatory phase was the discussion's base.

Besides that, in the extent that it made evident the weaknesses of the programs and the successful experiences, it contributed for the discussion on the strategies to be proposed for the use of facilities of this Program. It also allowed the establishment of criteria for prioritization regarding the activities to be implanted, considering the specificities of each city or metropolitan region. Furthermore, it allowed the identification of actions that, in the scope of this Program purposes, could be covered as from the scheduled activities for Year 1 or include in the programming of the following years.

The discussions held during these workshops allowed the definition of initial strategies for the use of the Program facilities and the initial mobilization needed for the constitution of Metropolitan Committees, initially foreseen to serve objective 4 (TB-HIV co-infection), but having its actuation expanded for the 4 objectives of the Program.

4.2. Structuring of Metropolitan Committees

Metropolitan Committees were not foreseen in the original draft of the GF-TB Program, however, based on the experience of AIDS State Commissions that still existed in some states, its creation was proposed right on the beginning of the Program execution.

The idea, on a local level, was to promote the participation of different actors in the planning, follow-up and execution of actions in each of the Metropolitan Regions, to create conditions for an effective approximation and interlocution among the Non Governmental Organizations (NGO) of each region with the respective managers of AIDS and TB (as well as among these), academy, and other strategic instances, in the expectation of inserting the discussion of questions regarding tuberculosis and its co-infection with HIV in the conduction of local public policies. It would be necessary a collegiate instance with an advisory and propositional character for the permanent discussion of aspects regarding planning, execution of components, and activities of the Program, its monitoring and evaluation in accordance with each local reality. Its purpose was to support and ensure the execution of the Program objectives and goals in its political, technical, and social aspects (sustainability).

Additionally, the expectation was for the committees, through an ascending scheduled, to define the schedule for years 3, 4, and 5 of the Program, in order to better serve local needs, once the activities of the two first years were already defined in the contract with the Global Fund.

It was defined that its specific composition in each metropolitan region would privilege the participation of the representatives from several social segments with experiences related to aspects of health and collective education, human rights, ethics, activism in TB and AIDS, or that otherwise act in the several areas of social control and fight against health hazards prevailing locally.

The Committees constituted spaces of coordination between government and civil society in order to contribute to the improvement of public policy for the tuberculosis control, giving visibility to the actions of social mobilization, advocacy, monitoring and evaluation, with a view to ensuring the citizenship for people with tuberculosis and defense of the principles and guidelines of National Public Health System - SUS. With the creation of the Committees, the articulation among the several entities under the optics of a network construction on a city level was fomented, thus extending in a short

while this proposal in a state scope, including its dissemination to other regions not inserted in the original proposal of the Program..

The Metropolitan Committee is considered as a democratic instance determinant for the effective participation of the civil society in TB control actions and TB/HIV co-infection. They have benefited, for implantation and maintenance, from the financing of GF.

5. GENERAL OVERVIEW OF THE ACTIONS OF CONTROL OF TB/HIV CO-INFECTION DEVELOPED IN THE 57 CITIES INCLUDED IN THE PROGRAM IN 2007

Information collected in the preparatory phase of regional workshops, through the quiz submitted to state coordination of Tuberculosis Control Programs (PCTs) and STD/AIDS Programs, offered us an updated and detailed picture of the control actions for TB/HIV co-infection developed in the 57 cities at the beginning of the Program (2006), besides the baseline for the planning and follow-up of the actions to be implanted.

The overview obtained showed, in relation to the attention to TB/HIV co-infection, a great discrepancy among several regions in the country, with the most serious situation in the North and Northeast region of the country, especially regarding the offer of serum tests for HIV for patients with tuberculosis and chemoprophylaxis for tuberculosis in individuals newly identified as HIV positives.

5.1. Offer of HIV test for patients with TB

The serum test by ELISA method was already offered in 2006 in most cities, but it was only available in the LACENs or Anonymous Testing Centers (CTAs), which limited its performance due to the need of dislocation of TB patients to the reference laboratory for blood withdraw. Furthermore, the deadline to return the result, often about 60 days, risked cases of still unknown co-infection.

As information provided by city coordination of PCTs, in South and Southeast regions of the country, there was a higher offer of serum test for HIV in TB services, with high rates of the test performance in the metropolitan regions of Porto Alegre (74 to 100%) and São Paulo (70 to 97%). In the metropolitan regions

of Rio de Janeiro, Recife, and Santos, the situation was heterogeneous, and above 30% in the metropolitan regions of Belém and Salvador. Eighteen (32%) cities did not know this information. The low rate of the test performance could be explained by operational issues regarding serum collection and transportation to LACEN, located in the capitals, and also due to the delay and uncertainty of the result obtainment, which ended by discouraging its request.

5.2. Treatment of TB/HIV co-infection

It was founded that the caring model was based on HIV/AIDS services and TB services that worked independently, with no integration among them, most of the times. This lack of integration between the programs was creating difficulties for a global approach of the patients with TB that were found infected by HIV assisted by the TB service, and for HIV/AIDS carriers who presented TB or latent infection by M.Tuberculosis in HIV/AIDS services. This way, as a general rule, in most of the metropolitan regions, the beginning of the antiretroviral treatment was delayed by the inexistence of inefficacy of the reference system and counter reference among the programs, due to the lack of provision of antiretroviral medication in TB services. On the other hand, the investigation of latent tuberculosis infection in people living with HIV/AIDS was not carried, since the HIV/AIDS services, where those people were treated, did not have people trained to perform the tuberculin test.

A greater structuring of the reference and counter reference network was observed in the cities of the South and Southeast of the country in relation to North and Northeast. In the metropolitan region of Porto Alegre, although HIV/AIDS programs were very central, there was a reference and counter reference system for TB/HIV co-infection implanted and operating, with immediate service when the destination service was of TB, with a waiting period of 30 days when the destination service was of HIV/AIDS. A not very different situation was reported in the metropolitan regions of São Paulo, Santos. In Rio de Janeiro, where there were reference health units in all cities, in general the criteria for submission was not very clear, which created some scheduling difficulties, unnecessary dislocation and waste of time for patients, whom often were not attended in AIDS services.

Scheduling mechanisms, that in general reflect the organization and integration level between the services, seem more appropriate in the metropolitan region of São Paulo and Porto Alegre, where the origin service schedules the appointment,

in general for a period of less than 5 days of waiting. In other metropolitan regions, the appointment schedule should be made in person in the reference, by the patient, result of great difficulties for the service, in addition to waste of time, expenses with dislocations and the lack of guarantee of appointment scheduling or service, increasing the possibility of treatment abandonment.

Besides that, there were problems on informing about TB cases treated in HIV/AIDS services, both in the notification of the cases and information on the outcome of the treatment and direct supervision of taking drugs.

5.3. Offer of PPD and chemoprophylaxis for TB in an HIV+ individual

The tuberculin test was only available in TB services, and although recommended for evaluation of tuberculosis infection in individuals infected by HIV, the number of tests performed for this purpose was not known in almost all cities. Once performed, the tuberculin test was recorded only in the patient's record or in the Record's Book of PPD located on the vaccines section of the health unit or on the PCT, making the identification of reactive HIV individuals difficult.

As to chemoprophylaxis for TB, its offer was extremely limited, not being performed in most of the cities evaluated. The inexistence of a record instrument hindered the reliable evaluation of its performance, as well as the evaluation of indication criteria in rare places where it was performed. Few cities had information on the number of HIV reactive individuals submitted to chemoprophylaxis for TB in 2006 and those who informed, the number was very low: Caucaia (2), Paulista (2), São João de Meriti (1), Mesquita (2), Niterói (26), Rio de Janeiro (182), Belo Horizonte (43), Contagem (4), Itaquaquecetuba (1), Itapeví (1), Mauá (9), Diadema (4) and Viamão (20).

5.4. Participation of civil society in control actions against TB

Implications of civil society organizations (OSC) in the fight against TB were quite incipient. In accordance with the information provided by state and city coordination of STD/AIDS and TB programs, due to regional workshops in 2007, there were 13 civil society organizations working with tuberculosis in only 6 of the 57 (11%) cities included in the Program, while with HIV/AIDS the number of OSC was of at least 394 acting in 82% of the cities.

6. IMPLANTATION AND RESULTS – OBJECTIVES 3 AND 4

Epidemiological and process indexes, the goals agreed, and the results achieves are presented in ATTACHMENTS 2 and 4, respectively. For epidemiological indexes, the results presented correspond to the performance in 2010, while for the process indexes, the results are presented for each one of the five years. Analysis of goals and indexes presented herein correspond to what was agreed upon with the Global Fund, due to the review by the end of the Program first phase.

6.1. Objective 3

Strengthening of the program of laboratory quality assurance, through training and monitoring and of the construction of a system of Laboratory Information of Tuberculosis.

The assembly of activities developed in the scope of objective 3, including training of professionals, standardization of procedures, preparation of technical manual, implantation of a quality control system for bacilloscopy, and supervision activities to the local laboratories, aimed the fulfilling of the goals agreed upon for the process indexes detailed on Table 1. For indexes 3.1 and 3.2, the goal was cumulatively over 5 years of the Program development and for 3.3 annually cumulative.

Table 1.: Description of indexes, agreed upon goals and results achieved by the end of the Program

Index	Index Description	Baseline Value	year	Goal	Result	% of the goal
3.1	No. and percentage of laboratories implanting activities of quality control	0/308	2007	395	395	100
3.2	No. of trained laboratory professionals to replicate information	70	2004	2117	1882	89
3.3	No. of supervisions in local laboratories*	0	2007	3091*	2636*	86

**Although this is an annual index, the goal and the result presented in this table correspond, for analysis purposes, to the accumulated over 5 years.*

6.1.1. Implantation of the "New Protocol of External Quality Control of Bacilloscopy" – Indexes 3.1 and 3.3

The quality control method of bacilloscopy implanted is the one recommended by WHO, based on the new reading, by sampling, of blades randomly selected from the batch sent by local laboratories to LACEN corresponding to a period of 3 pre-defined months. The new reading of a fixed number of blades per laboratory (n=80) is assumed, regardless of being positive or negative, which allow a better programming by the LACENs.

To implant the new methodology of bacilloscopy quality control, a great effort was made for the survey and registration of all laboratories performing the bacilloscopy in the area covered by the Program, including laboratories of public and private units accredited with SUS, besides hospital laboratories. The registration consisted in a local visit and evaluation of the infrastructure, personnel, equipment, information flow and practices. The registration and the inclusion of private and hospital laboratories in the bacilloscopy quality control system promoted by GF Program represented a big step in structuring and qualification in the laboratory network of the SUS. As the supervision technical visits were being performed, especially in big centers of Metropolitan Regions, the number of laboratories enrolled was overcoming the baseline, which was of 308 estimated laboratories in 2004. For Year 2, the baseline and the goals were reviewed based on the data obtained from the monitors' supervision reports, going to 395 laboratories.

Teams of monitors formed by experienced professionals were made, aiming to give the necessary support to the LACENs perform periodic and quality supervisions, training activities and support for creation, by the network laboratory, of operational procedures, as well as the new reading of the blades. The strategy used by GF Program served as establishment of a storage routine and submission of blades by local laboratories and contributed for the demonstration of feasibility of this new methodology. The high percentage of laboratories that implanted the quality control certifies the effectiveness of this strategy. On the first two years of the Program development, a great improvement was observed in relation to the quality of the blades, both in the smear creation and in the coloring, with an increase in the percentage of laboratories failure.

However, by the end of the 3rd year of GF Program, right after the dissolution of the monitors teams, a big decrease on the average number of supervisions (Table 2) performed was observed (806 on Year 3 to 473, Year 5). This demonstrates the difficult of LACENs to integrate them in their routines, due to the lack of human resources, in most of the cases. Actions developed should ensure the continuity of supervisions and new analysis, but this did not occur in as a whole. Program GF was still supporting the LACENs of RJ and SP until the end of the Program, which certainly contributed for the maintenance of the average global result above 50%. The new reading of the blades may also have a decrease in its rhythm in several places due to the lack of investments in human resources.

Table 2: Supervisions carried out in local laboratories in accordance with the execution year of GF Program.

Execution year	Goal	Result	% of the Goal
Year 1	180	373	107%
Year 2	373	471	116%
Year 3	846	806	95%
Year 4	846	513	61%
Year 5	846	473	56%
Total	3091	2636	86%

There was an important reduction of the resources, in the amount of U$ 490 thousand, as from year 3, regardless of the demand of FAP to CCM in a meeting where the risks that such reduction could create. As a consequence, there was the dismantlement of actions, before these were assumed by governmental entities. If maintained for a longer time (the last only two years), maybe these actions could be consolidated.

Although the advances are unquestionable, it is necessary to emphasize that the insufficiency of human resources and difficulties to transport blades and personnel, put in risk the sustainability of the actions implanted as the quality control and periodic supervisions to local laboratories.

6.1.2. Creation of the National Manual of Laboratory Surveillance of Tuberculosis and other Mycobacteria

Aiming the improvement of quality for the tuberculosis laboratory diagnose, the National Manual of Laboratory Surveillance of Tuberculosis and other Mycobacteria was edited in 2008 by the Ministry of Health, supported by Program GF, which contains general guidelines for structuring and operation of laboratory activities in a hierarchized and regionalized rationale, aimed for the quality improvement of the services provided, within criteria focus on the perfectioning and standardization of methods, the adequacy of requirements for biosafety, and the network organization. 2,550 copies were printed, and distributed for the network laboratories (ATTACHMENT 4).

Electronic version available through the link

http://portal.saude.gov.br/portal/arquivos/pdf/manual laboratorio tb.pdf

6.1.3. Trained laboratory professionals - Index 3.2

One thousand, eight hundred and eighty-two technicians of LACENs and local laboratories were trained in good practices, standardization of procedures for routines and biosafety.

Supporting the decentralization policy for culture performance and sensitivity test for the cities reference laboratories (city LACENs) and in partnership with the Ministry of Health, technicians with higher and high education level were trained in the culture performance in OGAWA medium, medium chosen by the MS since it presents operational and infrastructure facilities in relation to Lowestein-Jensen, allowing a faster and cheaper implantation, and lower laboratory infrastructure. However, political and financial investments were not sufficient and decentralization of culture and TSA was incipient. In some places there is a lack of equipment, such as a stove, in others, adequacy of physical area and/or human resources.

6.1.4. Construction of a Laboratory Information System for Tuberculosis

FAP started a partnership with the Ministry of Health (MS) in July 2007, through the technical consultancy to follow, develop, validate and homologate the Manager System of Laboratory Environment – GAL, Tuberculosis Module. The purpose was to accelerate GAL implantation, specific functionalities for Tuberculosis, in the 57 cities of Program GF, using a system module that was being developed by DATASUS RJ/COSAB managed by CGLAB.

After pilot in the Central Laboratory of the State of Paraná (LACEN), the Ministry of Health established the schedule for implantation contemplating, already in the first phase (end of 2008), with MS funding, some cities of Program GF. This way, FAP decided, still in the first step of the Program, that it would not extend the partnership, because it believed that the resources provided in the pact would not be necessary for implantation of GAL in the 57 cities. However, FAP stayed in contact with the institutions involved through the specialized technical consultancy for the system development until the end of the first step, to evaluate the need of investments for implantation of the network system of Tuberculosis Laboratories in the following steps, which was not necessary. At that time, this decision was taken by the Executive Secretary of CCM that opted for directing the resources for implantation of actions for quality improvement, in the reliability and in the efficacy of tuberculosis laboratory procedures.

Successive changes of the partnership terms between the Program GF-TB and the Ministry of Health (MS), initially foreseeing the purchase of equipment and training by Program GF and were assumed by MS, lead FAP to propose the forwarding of resources. This way, an incentive for the implantation of culture by Ogawa method was proposed, however this petition was not approved by CCM, which imagined submitting to the Global Fund a new Program, specific for the laboratory.

Nowadays, GAL is implanted on a national level, however it is only operational in epidemiology services and central laboratories, since most of local laboratories and basic units of health (UBS) do not have access to the internet, except UBSs from the City of Rio de Janeiro. São Paulo, already had its own information system, so it opted for not implanting GAL. Few local laboratories use this system for the patient's enrollment and sample submission for culture at LACEN. GAL integration with SINAN and National Mortality Report System - SIM is not operational yet.

6.2. Objective 4

Strengthening of decrease actions of TB/HIV co-infection including timely detection actions and the quality treatment for people living with tuberculosis and HIV/AIDS, information activities, education, and communication and strengthening of the Civil Society institutions for the development of control actions of co-infections in the community.

6.2.1. Timely detection and quality treatment for people living with tuberculosis and HIV/AIDS

The description of indexes and agreed upon goals, as the results achieved are in ATTACHMENT 3.

a) Increase in the offer for HIV test in the services of TB Indexes 4.1, 4.2, 4.4, and 4.6

4.2. no. and percentage of patients of TB receiving counseling and doing the tests for HIV/counseling
Goal: 137,113. Result: 104,498

4.4. no. of supervisions to programs of TB and HIV.
Goal: 10. Result: 33

4.6. no. of health professionals in programs of TB and HIV trained in co-infection: 1068. Result: 1,168

For information of this and of other indexes in the scope of this Program, instead of the national basis, the city base of the National Diseases Report System (Sinan) was used, which presented a higher speed of data, once the evaluation carried out in the end of the 1st year of the Program showed a variation between the two data basis for index 4.2, in the amount of 191%, corresponding to 9,664 less cases in the national Sinan (Annual Report Program GF-TB, Year 1).

To calculate the indicator no. and percentage of patients of TB receiving counseling and doing tests for HIV/counseling, the patients notified as TB in the municipal Sinan information system, with results for reactive, non reactive, and ongoing HIV tests were considered, as agreed with the Global Fund. A total of 104,498 patients with TB (82% of the goal) were submitted for HIV test over the five years of the Program development (ATTACHMENT 3).

Aiming to increase the rate of TB patients tested for HIV, considering the logistic and operational difficulties for performing the traditional serum test by ELISA method (displacement of the patient for collection in reference laboratory or transportation of serum and delay in the result obtainment), the quick test for HIV was provided by the MS as an alternative for TB services.

Thus, the implementing strategy of the Quick Test for HIV in TB services developed in the scope of this Program aimed not only the offer extension, but also the early diagnosis of HIV infections, decreasing the mortality of TB/HIV co-infection cases. As the proposed strategy, the exam would be carried out in the basic units of health in the moment of the TB diagnose, by professionals with higher education levels (doctors and nurses) of TB clinics trained for the test performance and pre and post counseling. Due to the lack of infrastructure, in TB services, for the kits storage, and as from the cities request, refrigerators were provided, in order to make possible the implantation of the Quick Test for HIV.

The results achieved for index 4.2 by year of the Program execution are on Table 3. Variations observed in years 3 and 5 may be due to problems in the records and information flow.

Table 3: No. and percentage of patients with TB receiving counseling and HIV test in accordance with the execution year of Program GF

Execution year	Goal	Result	% of the Goal
Year 1	13.185	16.128	122
Year 2	23.732	22.853	96
Year 3	30.130	19.304	64
Year 4	33.903	29.007	86
Year 5	27.122*	17.206	63
Total	128.072	104.498	82

**goal adjusted for 9 months, effective lasting of year 5*

In addition to achieving the goals agreed upon presented on Table 3, we may dimension the impact of this strategy through the comparison of performance rates of HIV test in 2007 and in 2011 (calendar year, national Sinan). For this analysis we consider as HIV test performed both for the definition agreed with the Global Fund, which includes as tested case for HIV the notified cases with reactive, non reactive and ongoing results, and other more operational, excluding from the tested cases those with the exam information "ongoing", once in this case, there is no certainty as to the effective realization of the exam.

This way, as showed on Table 4, 72.72% of 43672 cases of TB notified in 2011, informed on the request for HIV test (including "ongoing" ones). If we consider only the cases with reactive or non reactive results, there was an increment of the

proportion in cases of tuberculosis effectively tested for HIV in the period from 2007 to 2011 in nine of the eleven metropolitan regions (from 2 to 156%). In the regions of São Paulo, Baixada Santista e Porto Alegre, where the percentage of cases tested by ELISA method was already in 2007, higher than 70%, an increase was not observed or, when it did occur, was very low, as in Porto Alegre (2%).

This increment, however, did not occur uniformly. It was more expressive in the North and northeast, especially in the metropolitan regions of Salvador (156%), São Luis (147%), Belém (130%), and Recife (130%), achieving performance rates of the exam around 60% and 80% in Belém and São Luis, respectively.

Table 4 – Proportion of tuberculosis cases tested for HIV according to the Metropolitan Regions in 2007 and 2011.

	2007			2011					
Metropolitan Region (MR) and its cities	Total of TB cases	TB cases with reactive and non reactive HIV tests	Proportion of TB cases tested for HIV	Total of TB cases	TB cases with reactive and non reactive HIV tests	Proportion of TB cases tested for reactive and non reactive HIV	TB cases with reactive, non reactive, ongoing HIV tests	Proportion of TB cases tested for reactive, non reactive, and ongoing HIV	Variation 2007-2011 (reactive and non reactive)
	no.	no.	%	no.	no.	%	no.	%	%
MR of Manaus									74
Manaus	1889	585	30,96	2154	1153	53,52	1259	58,44	74
MR of Belém			23,03			53,36			130
Belém	1563	295	18,87	2013	1197	59,46	1495	74,26	215
Other city	278	129	46,41	450	142	31,55	244	54,22	-68
MR of São Luis									147
São Luis	863	273	31,63	1029	816	79,03	906	88,04	147
MR of Fortaleza			38,86			50,3			28
Fortaleza	2021	808	39,98	2063	981	47,55	1348	65,34	20
Other cities	318	101	31,76	382	249	65,18	269	70,41	103
MR of Recife			22,69			48,51			130
Recife	2282	728	31,91	2567	1220	47,52	1815	70,7	50
Other cities	872	426	48,85	1061	540	50,89	807	76,06	4
MR of Salvador			16,31			40,63			156
Salvador	3406	543	15,94	2782	1057	37,99	1640	58,95	138
Other cities	99	29	29,29	213	160	75,11	178	83,56	150
MR of Belo Horizonte			41,61			62,32			48
Belo Horizonte	1398	599	42,84	1194	770	64,48	893	74,79	49
Other cities	111	64	57,65	104	39	37,51	55	52,88	-53
MR of Rio de Janeiro			42,55			47,41			9
Rio de Janeiro	7733	3263	42,19	7489	2925	39,05	5153	68,8	-8
Other cities	4484	1936	43,17	4407	2716	20,12	3607	81,84	-52
MR of São Paulo			76,91			69,92			-10
São Paulo	7216	5516	76,44	7845	5183	66,06	5358	68,29	-13
Other cities	1996	1569	78,6	2426	1999	82,39	2108	86,89	4
Baixada Santista			70,08			75,61			-8
Santos	476	360	75,63	450	332	73,77	378	84	-3
Other cities	975	657	67,38	1084	828	76,38	992	91,51	13
MR of Porto Alegre			75,4			74,33			2
Porto Alegre	2166	1721	79,45	2580	1907	73,91	2067	80,11	-7
Other cities	1067	717	67,19	1379	1036	75,12	1245	90,28	12
Total	41213	20319	49,28	43672	25250	57,82	31817	72,72	17

Source: National Sinan, free access, consulted in August 2012

Although the metropolitan regions of Salvador and Recife has experienced a considerable increment in the test offer (113 and 52%, respectively), the performance rate in the cities of Salvador and Recife is still below 50%.

In general, the increase occurred with a higher frequency in the capitals than in other cities of the metropolitan regions, except for the metropolitan regions of Fortaleza (Caucaia, increase of 200%), of Rio de Janeiro (Nova Iguaçu, 272%, Mesquita, 176%, Belford Roxo, 95%, São Gonçalo, 60%, and Queimados, 59%, of Porto Alegre (Canoas, 104%)) (Table 5). In the city of Rio de Janeiro, where the performance rate for the HIV test in 2007 was already low (42.19%), no increase was observed in 2011 (39.05%).

The percentage of TB cases tested for HIV in 2011 was higher than 70% in 30 of 57 cities of Program GF. From these, Mesquita, Japerí, Nova Iguaçu, Duque de Caxias (RJ), Canoas, Viamão (RS), São Luis (MA), Lauro de Freitas (BA), and Cabo de Santo Agostinho, Olinda (PE), Maracanaú (CE), Guarulhos (SP) increased expressively the test performance between 2007 and 2011 (Table 5).

The 25,250 cases of TB tested in 2011 correspond to 57.82% of the notified cases (n=43,672) by the 57 cities included in the Program, and they represent an average increase of 17% in the test performance between 2007 and 2011. When we use the criterion agreed with the Global Fund, which included “ongoing” cases, we have an increase of 6,567 cases, and the coverage passes from 57.82 to 72.72% (31,817 tested cases).

In relation to the data speed and flow, there are marked differences between the National and the City Sinan, even considering that the data extracted from the city Sinan for the composition of the indexes of this Program refer to the period of 12 months different from the calendar year used for the composition of the tables from the National Sinan. The Program indexes were fed by-annually by the city Sinan with an expectation of higher speed in data and tables 4 and 5 were prepared as from the National Sinan. The existing differences between the two sources emphasize the fragility of the data in different levels of information. Besides that, it is important to emphasize that the information for Year 5 (source: city Sinan) presented on Table 3 refers only to 9 months and information on Table 4, obtained from the national Sinan, to 12 months, calendar year.

Table 5 – Proportion of tuberculosis cases tested for HIV in the cities covered by the Program

			2007			2011				
State	Cities	Total of TB cases	TB cases with reactive and non reactive HIV tests	Proportion of cases tested for HIV	Total of TB cases	TB cases with reactive and non reactive HIV tests	Proportion of cases tested for reactive and non reactive HIV	Total of TB cases with reactive, non reactive, Ongoing tests	Proportion of cases tested for reactive, non reactive, and Ongoing HIV	Variation 2007-2011 reactive and non reactive
		no.	no.	%	no.	no.	%	no.	%	%
RJ	**Japerí**	101	63	**62,37**	117	114	**97,43**	114	97,43	**56**
SP	**Itaquaquecetuba**	124	106	**85,48**	111	105	**94,59**	106	95,49	**12**
SP	**Taboão da Serra**	69	62	**89,85**	108	102	**94,44**	105	97,22	**4**
SP	**Itapeví**	91	85	**93,04**	115	108	**93,91**	110	95,65	**1**
RJ	**Mesquita**	123	42	**34,14**	128	120	**93,75**	121	94,53	**176**
SP	**São Bernardo do Campo**	216	191	**88,42**	213	198	**92,95**	202	94,83	**6**
RS	**Canoas**	236	106	**44,91**	385	353	**91,68**	357	92,72	**104**
BA	**Lauro de Freitas**	69	6	**8,69**	103	93	**90,29**	96	93,21	**500**
SP	**Cubatão**	111	91	**81,98**	110	98	**89,09**	106	96,36	**11**
SP	**Baruerí**	89	82	**92,13**	134	116	**86,56**	121	90,29	**-5**
SP	**Guarulhos**	428	383	**89,48**	491	423	**86,15**	447	91,03	**-3**
PE	**Cabo de Santo Agostinho**	95	64	**67,36**	127	109	**85,82**	109	85,82	**28**
SP	**Mauá**	104	94	**90,38**	161	138	**85,71**	143	88,81	**-4**
SP	**Guarujá**	264	165	**62,51**	313	259	**82,74**	286	91,37	**32**
RS	**Novo Hamburgo**	103	86	**83,49**	140	115	**82,14**	118	84,28	**-2**
RJ	**Nova Iguaçu**	693	154	**22,22**	707	580	**82,03**	619	87,55	**272**
SP	**Santo André**	182	141	**77,47**	282	227	**80,49**	240	85,1	**4**
RJ	**D.Caxias**	995	614	**61,7**	1053	835	**79,29**	978	92,87	**27**
CE	**Maracanaú**	162	79	**48,76**	239	189	**79,07**	198	82,84	**61**
MA	**São Luis**	863	273	**31,63**	1029	816	**79,03**	906	88,04	**147**
RS	**Sapucaia do Sul**	76	70	**92,11**	123	96	**78,04**	114	92,68	**-15**
SP	**Carapicuíba**	158	94	**59,49**	178	134	**75,28**	145	81,46	**27**
SP	**São Vicente**	374	263	**70,32**	391	292	**74,68**	376	96,16	**7**
SP	**Mogi das Cruzes**	118	102	**86,44**	158	118	**74,68**	135	85,44	**-13**
RS	**Porto Alegre**	2166	1721	**79,45**	2580	1907	**73,91**	2067	80,11	**-7**
SP	**Santos**	476	360	**75,63**	450	332	**73,77**	378	84	**-3**
PE	**Olinda**	246	141	**57,31**	291	214	**73,53**	273	93.81	**30**
RS	**Alvorada**	225	169	**75,11**	255	187	**73,33**	236	92,54	**-3**
RS	**Viamão**	120	66	**55,11**	200	141	**70,51**	164	82	**29**
RJ	**Itaboraí**	130	92	**70,76**	129	90	**69,76**	115	89,14	**-1**
RJ	**Niterói**	624	432	**69,23**	581	403	**69,36**	507	87,26	**0**
RS	**São Leopoldo**	133	109	**81,95**	139	93	**66,91**	119	85,61	**-18**
SP	**Praia Grande**	226	138	**61,06**	270	179	**66,29**	224	82,96	**6**
SP	**São Paulo**	7216	5516	**76,44**	7845	5183	**66,06**	5358	68,29	**-13**
MG	**Belo Horizonte**	1398	599	**42,84**	1194	770	**64,48**	893	74,79	**49**
BA	**Camaçarí**	99	23	**23,23**	110	67	**60,9**	82	74,54	**165**
PA	**Belém**	1563	295	**18,87**	2013	1197	**59,46**	1495	74,26	**215**
SP	**Osasco**	259	99	**38,22**	307	178	**57,98**	201	65,47	**53**
RJ	**Queimados**	145	49	**31,81**	113	61	**53,98**	82	72,56	**69**
AM	**Manaus**	1889	585	**30,96**	2154	1153	**53,52**	1259	58,44	**74**
PE	**Camaragibe**	77	31	**40,25**	49	25	**51,02**	36	73,46	**28**
CE	**Fortaleza**	2021	808	**39,98**	2063	981	**47,55**	1348	65,34	**20**
PE	**Recife**	2282	728	**31,91**	2567	1220	**47,52**	1815	70,7	**50**
RJ	**São João de Mertiti**	464	258	**55,6**	382	165	**43,19**	208	54,45	**-23**
CE	**Caucaia**	156	22	**14,1**	143	60	**41,95**	71	49,65	**200**
RJ	**B Roxo**	315	65	**20,63**	304	124	**40,78**	215	70,72	**95**
RJ	**Rio de Janeiro**	7733	3263	**42,19**	7489	2925	**39,05**	5153	68,8	**-8**
BA	**Salvador**	3406	543	**15,94**	2782	1057	**37,99**	1640	58,95	**138**
MG	**Contagem**	111	64	**57,65**	104	39	**37,51**			**-34**
RS	**Gravataí**	174	111	**63,79**	137	51	**37,33**	137	100	**-42**
PE	**Paulista**	141	105	**74,46**	194	71	**36,59**	129	66,49	**-50**
PA	**Ananindeua**	278	129	**46,41**	450	142	**31,55**	244	54,22	**-30**
RJ	**São Gonçalo**	541	110	**20,33**	568	179	**31,51**	441	77,64	**55**
PE	**aboatão dos Guararape**	313	85	**27,15**	400	121	**30,25**	260	65	**11**
RJ	**Nilópolis**	178	21	**11,79**	155	23	**14,83**	46	29,67	**25**
RJ	**Magé**	175	36	**20,57**	170	22	**12,94**	161	94,7	**-38**
	Total	41055	14551	**49,29**	43504	16907	**57,82**	22639	72,72	**17**

Source: National Sinan, free access, consulted in August 2012

Implantation of TR-HIV for patients with TB was certainly an advance; however its implantation was not as it was expected: It is still not available in most of services diagnosing TB (except in São Paulo) and the percentage of cases tested in the area covered by the Program was of 57.82% (variation between 97.43% to 30.25%) in 2011. This percentage, although higher to what was observed in 2007 (49.28%), does not differ from the observed for the conjunction of cities in the country not included in Program GF, which was of 60.09% in 2011 (source: SINAN).

The goal of the professionals trained for the performance of TR-HIV and pre and post test counseling was achieved in all metropolitan regions (n=1168) and an increase equal or higher than 10% of the percentage of cases of TB tested for HIV was observed in 30 of 57 cities between 2007 and 2011 (variation between 10 and 500%), especially in the cities of the North and Northeast of the country, where the access to the traditional test (Elisa) was too low (Table 5).

A survey conducted with the state and city programs for control of TB pointed out as the main difficulties for implanting TR-HIV in TB services, the great turnover of trained professionals (by transfers or precarious links), the insufficiency of human resources leading to the accumulation of attributions and work overload, the lack of appropriate/reserved place for counseling and test performance, lack of refrigerator for the kit storage, the time needed for conducting counseling and TR-HIV before the number of patients to be attended, among others. In addition, the decentralization policy for the Family Health Strategy (ESF), accentuated in these last few years, considerably increase the number of services diagnosing and treating TB, without the corresponding structure for the diagnosis of infection by HIV. As to the supply of inputs, in general, the distribution of kits of TR-HIV for TB services was being integrated gradually in the curriculum of state programs of STD-Aids and today this distribution is regular in most of the States.

In São Paulo, although no increase has been observed in the test performance, which was already the one of the highest in the Country, TR-HIV implantation in TB services clearly represented a quality jump, as there was an increase in the infection diagnosis speed by HIV, benefiting co-infected patients.

b) Treatment of active tuberculosis in people living with HIV/AIDS Index 4.1

4.1. no. and percentage of reactive HIV patients with TB treated with DOTS strategy

Annual cumulative index. Goals and results per year in the table below.

Table 6: No. and percentage of reactive HIV patients developing TB and receiving treatment under the DOTS strategy

Execution year	Goal	Result	% of the Goal
Year 1	500	464	93
Year 2	1.177	781	67
Year 3	1.212	565	47
Year 4	1.242	794	64
Year 5	1.079	797	74
Total	5.210	3.401	65

The cases of active tuberculosis in people living with HIV/AIDS are treated, according to information of the cities, more often in AIDS services, as the flows defined to the local level.

With integration between the TB and AIDS programs is still incipient whether for the development of actions, or on the record level or information exchange about co-infection, we do not have information regarding HIV/AIDS carriers suffering with TB (frequency, percentage of patients in TDO, and mortality rate), such information that should be provided by HIV/AIDS programs. We were informed that the AIDS services, in general, did not offer a treatment directly observed.

Variations observed in the number of patients treated every year with DOTS strategy presented on table 6 may be related to problems in the record and in the information flow from the basic units of health to the national level.

c) Treatment of latent infection by M.tuberculosis in people living with HIV/AIDS indexes 4.3 and 4.9

4.3. no. of health professionals trained in the administration of chemoprophylaxis in HIV reactive individuals.

Goal: 970 – Result: 1041

4.9. No. of people living with HIV/AIDS receiving chemoprophylaxis with INH;

Goal: not defined. Result: 117 (agreed with the Global Fund for report as from year 4)

A great effort was made in the scope of this Program to sensitize and train professionals from HIV/AIDS services, aiming to increase the treatment offer of latent infection by M.tuberculosis (ILTB) in people living with HIV/AIDS; however, the impact of this action is hard to evaluate due to the inexistence of a record national system. Despite of the doctors and nurses training of HIV/AIDS services (n=1041) in the clinical handling of TB/HIV co-infection, focused in the prevention by chemoprophylaxis of TB and the training of nurses from infectology services in PPD performance, the treatment of latent tuberculosis is still very limited.

There are operational difficulties for the tuberculin test performance related to the lack of trained professionals and in a sufficient number, besides the need of the patient's return to the service after 72 hours for test reading, which must coincide with business days. Furthermore, the lack of sensitization by the doctors, which often do not care too much for the subject, the fact that the programs prioritize the active TB treatment instead of the latent one, the fear of unduly treating with monotherapy, in case there is a failure in the diagnostic of active TB, among others, were identified as factors that are making difficult the implanting of chemoprophylaxis for TB in people living with HIV/AIDS.

We know that in the city of São Paulo, the tuberculin test is available in 15 of 25 services of STD/AIDS Program, in Belo Horizonte, in 3 of 5 ambulatory services of reference.

The number of people living with HIV/AIDS that should be performing chemoprophylaxis for TB is not known, whether from new cases of HIV infection, or from the annual performance of the tuberculin test in people infected by HIV.

The number of people living with HIV/AIDS subjected to the treatment of latent infection by TB is also not know in a Country level, due to the inexistence of a national information system.

The treatment records of latent infection by TB in patients with HIV infection are extremely low and reflect the difficulties to implant it in health services. Only São Paulo and Rio de Janeiro reported the treatment of latent infection by TB (71 and 46 individuals, respectively, between February and April 2012). Although there is no defined goal, these numbers are low and they probably represent pilot Programs locally developed and not a routine practice in health services.

The attempt to implant a record instrument and a national information system on chemoprophylaxis for TB, that would include HIV positive individuals, in addition to other indications of chemoprophylaxis for TB proposed in the scope of this Program in 2008, was aborted by the National Programs of STD/AIDS and Tuberculosis, which feared the multiplication of the information systems.

Although we did not succeeded to advance in the implanting of a national information system, several States took the initiative and already implanted or are developing instruments for registration and defining information flows on City and State levels, such as the State of Rio de Janeiro, São Paulo, Ceará, Maranhão, Minas Gerais and the cities of Porto Alegre and São Leopoldo, with these two last ones using a specific form prepared in the scope of Program GF. However, except for São Paulo, which has a computerized system on a State level, these instruments are still filled in charts or epidemiological surveillance sectors due to the lack of information systems.

Thus, it is not possible to point out eventual progresses, even that local, in the implantation of chemoprophylaxis for TB in patients living with HIV/AIDS.

6.2.2. Strengthening of Civil Society institutions for the development of control actions of co-infection Indexes 4.5, 4.7 and 4.8

4.5. no. of community agents trained to support co-infected patients

Goal: 630. Result: 670

4.7. no. of NGO Programs approved for financing actions of control of TB/HIV co-infection

Goal: 29. Result: 27

4.8. no. of people reached by the NGO Programs

Goal: 58,000. Result: 82.492

The strategies adopted by the Global Fund TB Brazil Program regarding HIV-TB co-infection, integrate a set of activities destined to promote the participation of the civil society and full integration of all governmental actors, following the path already walked by the Brazilian response before HIV/Aids, that had in the empowerment of affected people, in community mobilization and in the partnership strengthening of Governmental Organisms (GO) with NGO their main pillars, prioritizing in its actions, the most vulnerable groups. Forum NGOs TB of Rio de Janeiro, that acts in close coordination with Forum NGO Aids local, served as inspiration for mobilization in other States of the Country in the creation of similar structures of mobilization and actuation. An important action of political mobilization in TB was the creation, in the scope of the Legislative Assembly of the State of Rio de Janeiro (ALERJ), of the State Parliamentary Front of Aids and Tuberculosis in Rio de Janeiro and the State Day of Awareness and Mobilization of Fight Against Tuberculosis, serving as a model for the creation of similar Fronts in other states, and more recently, (March 2012), for the creation of the National Parliamentary Front in the Fight Against Tuberculosis, in the National Congress. These alliances preceded and fostered for the National Council of Health to approve in July 2011, the RESOLUTION no. 444, which brings new deliberations for the national politics of Tuberculosis control. Inspired in the experience of STOP TB PARTNERSHIP and with the support of NTCP/MS and OPAS, the “Brazilian Partnership Against Tuberculosis” was created in 2004, seeking to nationally integrate, OG, Academy and Organized Civil Society (OSC) for the fostering of a collective action of mobilization and confrontation with Tuberculosis.

In the scope of the Program Global Fund in Brazil, to strength the actions of Advocacy, Communication, and Social Mobilization, in partnership with OSC, and the community section the CCM (Country Coordinator Mechanism) was created, and local instances, called "Metropolitan Committees" in the 10 Priority Metropolitan Regions that may articulate, approximate, and integrate OSC, Academy, and local Managers of Tuberculosis and Aids, encouraging them to monitor the planning, implantation, and execution of local actions of the Program Global Fund. These Committees started to assume the main role in this process, being articulated in a National Network, and inspired the creation of similar structures in other States not included in the Program GF. The most emblematic strategy was the pilot experience of “COMMUNITY DOTS” to improve, according to the community approach, the search, the diagnose, and the supervised treatment

of TB in areas of high endemicity, hard access, and groups with a greater vulnerability.

Regarding the control of TB/HIV co-infection, aiming to sensitize and mobilize different social actors on the silent impact of Tuberculosis in its respective areas of actuation, FAP performed over the period of the Program execution "Sensitization Workshops for Community Leaderships", presenting local and regional indicators of HIV/Aids, Tuberculosis, and TB/HIV co-infection, besides presenting for these actors things that were already done, in order to identify, with them, strategies to extend this solidarity network, and for the formation of new local strategic partnerships. In this sense, Workshops in Minas Gerais, Bahia, São Paulo and Rio de Janeiro were carried out. It is also important to emphasize the participation of the civil society in the Monitoring and Evaluation Network.

Several materials were created as a pocket book on TB-HIV co-infection and advertising material as posters (25,000 copies) and folders (105,000 copies) used by OSC and OG involved in the control of TB/HIV co-infection in communities and also in the structures of diagnostic and treatment.

Still regarding the actions of the Program Global Fund, the incentive to Programs of Behavioral Intervention before strategic segments is worth mentioning, for the fight against TB/HIV co-infection. To make this Program GF available, FAP, the responsible receptor for this action, articulated with NTCP/MS and CCM, prepared and executed the respective Public Notices for Programs Selection, has constituted the External Committees for Selection, and after defined the Programs approved in three public notices, it was held responsible for the due adequacies, agreed between the interested parties, for the celebration of Covenants and the execution monitoring. The relation and geographic distribution of Programs of OSC funded are in ATTACHMENTS 5 AND 6, respectively.

With a reduced number of NGOs with a recent history of activism for fight against TB, the public notices executed under the supervision of FAP, with the possibility of coverage of up to 22 Programs, they had besides its symbolic role, a triggering role of a new approach with the strategic segments of the society, and it was one of the links in the construction of partnership relations and articulation between the public services, especially PCT (state and city) and NGOs, such indicator that was crucial before the challenges that TB/HIV co-infection present to us.

It should be noted that the choice of the regions included in the last public notice was the result of what is conventionally called “Ascending Planning”, staying on

behalf of the deliberation by the Metropolitan Committees, of priority regions that, as from the resources available and local demands, decided by the need or not of such actions.

Due to the need of minimal references, in compliance with the proposal approved by GF, the Programs approved in the three public notices started with an expectation of a minimum number of people to be accessed by their specific actions, in general in the amount of 2,500 people each, understanding by "accessed people"; besides those who effectively participate in structured actions such as meetings, trainings and workshops, and also those that, under the most different ways such as health fairs, street approaches, and other means, were informed on the impact of tuberculosis.

Since the presentation of the first technical and financial reports, we could find that some of these Institutions were having difficulties to follow that that was oriented both in the moment of signing the Covenants and in the step of Programs adequacy. Allied to a relative administrative fragility of a good number of those outsourced and to discontinuity of initial teams involved in these actions, this made some of these Programs to find difficulties in the fulfillment of the planned steps and even in its management, signaling to us the need for more rigor upon its analysis, both regarding the legal responsibilities of Institutions accredited and the effort for these actions to be legitimated and articulated with the local managers and respective Metropolitan Committees. In spite of these difficulties, even considering that some few Institutions presented problems in the partial or total execution of the Program, if we analyze their pertinence in qualitative terms, the result presented, even that partial, had a good performance and served as an important indicator for future actions.

The seminar for evaluation of the impact of these Programs and of the difficulties encountered to implant them, performed in April 2012, has evidenced, in addition of the disarticulation between the STD/Aids and Tuberculosis programs, which hampers the development of integrated actions, the resistance of professionals, who keep a verticalized relation with organizations and the population, the difficult to access the communities due to violence and parallel power as obstacles to the development of proposed control actions of TB-HIV co-infection.

As strategies to the confronting, the network, the availability of epidemiological data to demonstrate the importance of the problem, local pact among the several spheres of the government for definition of strategies of social mobilization in

political spaces and media were pointed out; reduction with political involvement in the choice of coordinators for the health areas, privileging the technical competence. The partnership with the local media was strategic for the overcoming of the obstacles in the beginning.

With the return of Tuberculosis as priority subject of actions for health promotion, a significant "wave" of mobilization started to reach instances of the society so far partial or absolutely alienated to this question, including even the National Movement of Fight Against Aids, directly affected by the TB impact.

With the social rescue of this agenda, Fundação Ataulpho de Paiva – Brazilian League Against Tuberculosis, recovering its main character role of social mobilization and health promotion resumed an old proposal, and in the path of the GF legacy, is opening the Center of Social Action FAP with the purpose of fostering the development of community actions of health promotion focused in the attention to questions of Tuberculosis and Aids, and in the fostering of interlocution and integrated actions with university students from different areas of majoring, aiming to reduce the distances between the community and the academy and to foster a human university major, and sensitive to local realities.

6.3 Epidemiological evaluation

Three indicators of impact were agreed upon, to wit: incidence rate of positive TB cases to bacilloscopy, mortality rate by TB and detection rate of bacillipherous cases, in addition to two other follow-up indicators: percentage of treatment success and percentage of the population covered by DOTS.

The goals and results achieved by the end of the 5th year of development of Program GF-TB are on Table 7 and ATTACHMENT 7.

Table 7: Indicators, Targets & Results achieved by the Program (Year 5)

Indicator	Baseline Value	year	Goal	Result
Incidence rate of TB positive cases	42.1/100.000	2003	40.0/100.000	37.8/100.000
Mortality rate by TB	5.1/100.000	2002	3.5/100.000	4.21/100.000
Detection rate: new BAAR positive cases	72%	2004	80%	94%
Treatment success rate: new BAAR positive cases	70%	2002	85%	67.7%
Percentage of the population covered by DOTS*	26%	2002	90%	74.8%

** Population covered by health unit where at least one patient was subjected to the treatment supervision in the year.*

- Incidence rate of TB cases positive to bacilloscopy.

The period of analysis of this indicator is from January to December. The goals for years 1 to 5 were recalculated using the year 2003 as a baseline and the estimations of WHO for the incidence rate of positives to bacilloscopy. According to this estimation, the goals would tend to increase from year 1 to year 3, as a reflex of a higher discover of cases; for years 4 and 5, the goals would tend to decrease as a result of the increase of the disease control.

The result for year 5 was calculated using data from 2010 obtained through municipal Sinan. Although the incidence rate observed (37,8/100,000) is lower than the defined goal (40/100,000), it can be observed over these years a small reduction in the incidence rates of bacillipherous (from 42,1 in 2003 to 37,8/100,00 in 2010), without the expected increase in the initial years of this series. This result is relatively modest and it represents an average rate of decrease of 1.4% per year. It should be noted that in this period, a great effort by NTCP was developed aiming the elimination of duplicities in databases, which may have contributed for the decrease in the incidence rate.

- Mortality rate by TB

The period of analysis of this indicator is from January to December. For year 5, the data obtained from the National System of Mortality (SIM) of 2010 were used. The mortality rate observed (4.2/100,000) was higher than the goal scheduled, which was of 3,5/100,000. The annual average decrease observed was of 2.2% per year. It may have contributed for this low reduction of the decrease rate of this indicator the fact that, in this period, the Ministry of Health, aiming the improvement of data on mortality, performed the crossover of SIM and Sinan databases. However, we can't neglect the eventual contribution of deaths due to TB/HIV co-infection for the maintenance of such rates.

- Detection rate: new BAAR positive cases

This indicator was constructed from the relation between the incidence rate of bacilliferous of 2020 (37.8 cases every 100.000 people) divided by the incidence rate of bacilliferous estimated (40/100,000 people/year). Goal: = 80% and result = 94% (117.5%)

- Treatment success rate: new bacilliferous cases

The goal was to successfully treat 85% of new bacilliferous cases. From January to December 2010, 33,346 new bacilliferous cases were identified, from which 67.7% (n=22,553) were successfully treated.

- Percentage of the population covered by DOTS*

This indicator represents the population covered by US performing DOTS in relation to the totality of the population covered by US, understanding by US performing DOTS as the unit that performed at least the supervised treatment of one patient during the year.

According to this indicator, 74.8% of the population is covered by DOTS (83% of the goal, which was of 90%). The construction of this indicator seems wrong to us, since it suggests that 74.8% of the cases identified in that year were treated with DOTS, which is not real, once this percentage refers to the proportion of cases identified in health units performing DOTS and it does not represent necessarily the number of patients in supervised treatment.

7. CONCLUSIONS

The Program of the Global Fund has significantly contributed for the majoring in TB of health professionals and members of the organized civil society, whether through the promotion of seminars and technical meetings, or through the creation of a Monitoring and Evaluation Network, according to the opinion of managers and representatives of the civil society in the Metropolitan Committees. These forums were very important for more approximation between the TB and STD/AIDS programs, and for greater involvement of OSCs, to the extent that it gave more visibility to questions related to TB/HIV co-infection, allowing the introduction of the subject in its agenda.

However, this integration is still incipient and reflects in the quality of the attention provided to the patient, as the delay in the identification and treatment of cases, besides causing problems related to the record and information flow. Due to the difficulties of integration between the HIV/AIDS Programs in several governmental spheres, we could only work in the area of patients with TB who developed infection by HIV. In the area of people living with HIV/AIDS, our

actuation was limited to the training activities in co-infection of professionals with higher education degree, especially doctors that act in HIV/AIDS services.

On the other hand, progresses from the different actions triggered by the Program Global Fund Brasil was observed, through articulated and complementary actions, such as the participation of representatives of the Civil Society in committees and incorporation of Tuberculosis in the State Commission of Aids in Rio de Janeiro, collegiate agency linked to SES/RJ that, as from 2009, started to be called State Commission of Aids and Tuberculosis, the edition of the Resolution of the National Council of Health placing TB as priority in the Ministry of Health and the creation of the Parliamentary Front in the National Assembly.

Progresses shall be considered as the support to innovative actions, especially in the area of community DOTS, street and prison population (objectives 1 and 2), developed under the responsibility of Fiotec, and in the area of mobilization and social control and in the expansion and internalization of the offer for HIV test.

There are still some important problems in relation to the information system, especially to the quality and rate of data, which certainly influence in the evaluation of the impact of implanted actions.

Some indicators, as the supervised treatment in co-infection and performance of tests for HIV are out of FAP's governance, such as the activities of supervision to local laboratories after the ending of the financing period by Program GF (end of year 3, except SP and RJ, until year 4). This way, it would be wise to establish the indicators and goals, are defined also with the Global Fund, the indicators over which the receptors have governance.

More agility of the analysis by the local agent and feedback to the receptor by the Global Fund, would allow timely adjustment and that would effectively contribute for the improvement of the Programs in course.

The difficulties found for the obtainment of data necessary to Program GF for problems of the information system (Sinan), served as a motto for structuring, in a national level, of the Monitoring and Evaluation Network. Also thanks to the demands of Program GF, Sinan was remodeled, including with the modification of the sheet to notify the cases, which started to incorporate data on TB/HIV co-infection, so far inexistent.

In relation to sustainability of Metropolitan Committees, it still has to be defined, even after the Program closing, the MCs continue to meet in the expectation of finding a way to ensure its continuity, since, in addition of the small funding for infrastructure, they could also lose influence in the definition of the activities to be implemented, since the approval by MC was so far a necessary condition for financing actions filed by the cities as from year 3, through the ascending planning. Regional meetings of articulation are being performed with NTCP technicians, with the purpose of defining sustainability strategies. These strategies, however, seem to be more related to institutional solutions than to proposals of the civil society, what may compromise the independence of these organizations in the Committee. The Ministry of Health is allocating resources to create facilities for the fostering of MCs already in 2012, aiming to ensure not only the sustainability of such structures, as well as its expansion for areas of the country not reached by Program GF-TB.

Standardization of laboratory procedures through creation of SOP (Standard Operational Procedure) by local laboratories and the implementation of the Program for Quality Control were clearly great progresses, however this is still uncertain, as the Ministry of Health will ensure its continuity, as there does not seem to exist a decentralization strategy of the culture aiming to increase the offer of the sensitivity test. Despite of the increase of resources in MS for confronting TB, there was a loss in terms of the supervision quality of laboratories, GAL is still not effectively implanted and the offer of culture for BK and TSA are still very limited.