



ORGANISMO ANDINO DE SALUD - CONVENIO HIPÓLITO UNANUE

PROGRAMA "FORTALECIMIENTO DE LAS REDES DE LABORATORIO DE TUBERCULOSIS EN LA REGIÓN DE LAS AMÉRICAS"

## Systematization of possible routes for the continuity of progress achieved by the Tuberculosis Laboratory Network

Grant: "Strengthening of the Tuberculosis laboratory network in the Americas"





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**SYSTEMATIZATION OF POSSIBLE ROUTES FOR THE CONTINUITY OF PROGRESS ACHIEVED BY THE TUBERCULOSIS LABORATORY NETWORK / Program: "Strengthening of the Tuberculosis Laboratory Network in The Americas"-- Lima: ORAS - CONHU; 2019. 84 p.; 5 tables, 5 fig.**

SISTEMATIZACIÓN / TUBERCULOSIS / LABORATORIOS / CONTINUIDAD / AVANCES

## **SYSTEMATIZATION OF POSSIBLE ROUTES FOR THE CONTINUITY OF PROGRESS ACHIEVED BY THE TUBERCULOSIS LABORATORY NETWORK**

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## Acronym

<b>AIDS</b>	Acquired Immunodeficiency Syndrome
<b>BK</b>	Bacilloscopy
<b>CARLAC</b>	Regional Advisory Committee for Multi-Country Grants of the Global Fund in Latin America and the Caribbean
<b>COMISCA</b>	Council of Health Ministers of Central America and the Dominican Republic (From Spanish: Consejo de Ministros de Salud de Centroamérica y República Dominicana)
<b>BSC</b>	Biosafety Cabinet
<b>DR-TB</b>	Drug resistant Tuberculosis
<b>DOTS/TAES</b>	Directly Observed Treatment System / Tratamiento Acortado Estrictamente Supervisado
<b>DST</b>	Drug Sensivity Test
<b>GDF</b>	Global Drug Facility
<b>GeneXpert</b>	Molecular method equipment, integrates and automates sample preparation, DNA amplification and Tuberculosis detection.
<b>GLI</b>	Global Laboratory Initiative
<b>GF</b>	Global Fund to Fight AIDS, Tuberculosis and Malaria
<b>HIV</b>	Human Immunodeficiency Virus
<b>InDRE</b>	Institute of Epidemiological Diagnosis and Reference, Mexico (From Spanish: Instituto de Diagnóstico y Referencia Epidemiológicos, México)
<b>INEI</b>	National Institute of Infectious Diseases, Argentina (From Spanish: Instituto Nacional de Enfermedades Infecciosas, Argentina)
<b>NEP</b>	National Strategic Plan
<b>ISP</b>	Public Health Institute of Chile (From Spanish: Instituto de Salud Pública de Chile)
<b>ITM</b>	Institute of Tropical Medicine, Antwerp (Belgium)
<b>LAC</b>	Latin America y the Caribbean
<b>LPA</b>	Line Probe Assay (for rapid detection of mutations associated with resistance to anti-Tuberculosis drugs)
<b>MDR-TB</b>	Multidrug resistant Tuberculosis



<b>NRL</b>	National Reference Laboratory
<b>NTP</b>	National Tuberculosis Control Program
<b>ORAS- CONHU</b>	Andean Health Organization-Hipólito Unanue Agreement (From Spanish: Organismo Andino de Salud-Convenio Hipólito Unanue)
<b>PAHO</b>	Pan American Health Organization
<b>PCS</b>	Primary Care System
<b>PDL</b>	Persons Deprived of Liberty
<b>REDLAB</b>	Network of National Public Health Laboratories of Central America and the Dominican Republic (From Spanish: Red de Laboratorios Nacionales de Salud Pública de Centroamérica y República Dominicana)
<b>REMSAA</b>	Meeting of Ministers of Health of the Andean Area (From Spanish: Reunión de Ministros de Salud del Área Andina)
<b>RR</b>	Rifampicin Resistance
<b>SECOMISCA</b>	Executive Secretary of COMISCA
<b>SNL</b>	Supranational Laboratory
<b>TAV</b>	Technical Assistance Visit
<b>WHO</b>	World Health Organization
<b>XDR-TB</b>	Extensively drug resistant Tuberculosis
<b>XPRT MTB- RIF</b>	Rapid molecular test that detects Tuberculosis Complex and rifampicin resistance at the same time.





# Presentation



## Presentation

➔ From January 2017 to December 2019, the Regional Grant for the Strengthening of Tuberculosis (TB) laboratories in the Americas, supported by the Global Fund to Fight AIDS, Tuberculosis and Malaria (GF) has been implemented with notable progress in improving the diagnostic capacity of TB laboratory networks in the 20 countries it covers.

The resources have been managed by the Andean Health Organization - Hipolito Unanue Agreement (ORAS - CONHU), which is based in Lima, as the main recipient, and has had two sub-recipients: the Executive Secretariat of the Council of Ministers of Health of Central America and Dominican Republic (SECOMISCA), in San Salvador, and the Pan American Health Organization (PAHO), located in Washington. These three institutions have coordinated and executed all activities.

The grant, which is ending its third year, has worked to strengthen the technical management capabilities of national Tuberculosis reference laboratories, and supranational laboratories that act as network heads for the 20 countries and that are located in Argentina, Chile and Mexico, with the following distribution:

<b>Argentina</b>	<ul style="list-style-type: none"> <li>• Argentina, Guyana, Paraguay, Peru, Venezuela.</li> </ul>
<b>Chile</b>	<ul style="list-style-type: none"> <li>• Chile, Bolivia, Colombia, Cuba, Ecuador, Dominican Republic, Uruguay.</li> </ul>
<b>México</b>	<ul style="list-style-type: none"> <li>• Mexico, Belize, Costa Rica, El Salvador, Guatemala, Honduras, Nicaragua, Panama.</li> </ul>

A study of Systematization of experiences and learning derived from the implementation of the project has been recently developed, highlighting that all technical teams in the 20 countries have benefited from training and updating tools to shorten diagnostic times and deliver results with greater quality, even having a cascading improvement effect for the network of each country, since knowledge and practices have been shared with establishments of other levels of complexity in which samples are also processed and cases are received.

The report resulting from the Systematization study presents a series of challenges that merit follow-up, and a review of the state of progress within it and the potential for sustainability, as an input for the continuity of actions on the issue of TB beyond the GF regional grant. That analysis constitutes the center of this document.

Also, as part of the planned activities, a consultancy was carried out to evaluate the economic and political sustainability of the achievements. However, during his visit and meeting with ORAS CONHU on February 11th 2019, the Global Fund's portfolio manager, Mrs. Lucrecia Palacios, insisted on the importance of involving more technical teams in decisions and discussions on budget for Tuberculosis laboratories and in the design of strategies in their respective countries. The extension of the systematization study points to this, to gather in the same document the programmatic frameworks that could allow technical teams to influence the monitoring of the fundamental activities that guarantee the work of the Tuberculosis laboratory network in the Americas.

## Introduction

➔ In May 2014, the World Health Assembly adopted a resolution fully supporting the new Global Strategy for Tuberculosis after 2015<sup>1</sup>. The strategy aims to end the global Tuberculosis epidemic and to reduce deaths from this cause by 95%, reduce new cases by 90% between 2015 and 2035, and ensure that no family has to deal with catastrophic costs due to Tuberculosis. Provisional milestones are set for 2020, 2025, 2030 and 2035.

**Table 1: Milestones for the End Tb World Strategy**

	Baseline	Current	Milestones		SDG Targets	End TB Targets	
	2015	2017	2020	2025	2030	2035	
			% reduction (absolute value)				
Reduction in number of TB deaths compared to 2015	25,100	24,000	35% (16,300)	75% (6,300)	90% (2,500)	95% (1,300)	
Reduction in TB incidence rate* compared to 2015	27,3	28,0	20% (21,6)	50% (13,6)	80% (5,6)	90% (2,7)	
Percentage of TB affected families facing catastrophic costs due to TB	N/A	N/A	0%	0%	0%	0%	

**Note:** \*Rate per 100.000 population

**N/A:** Not available

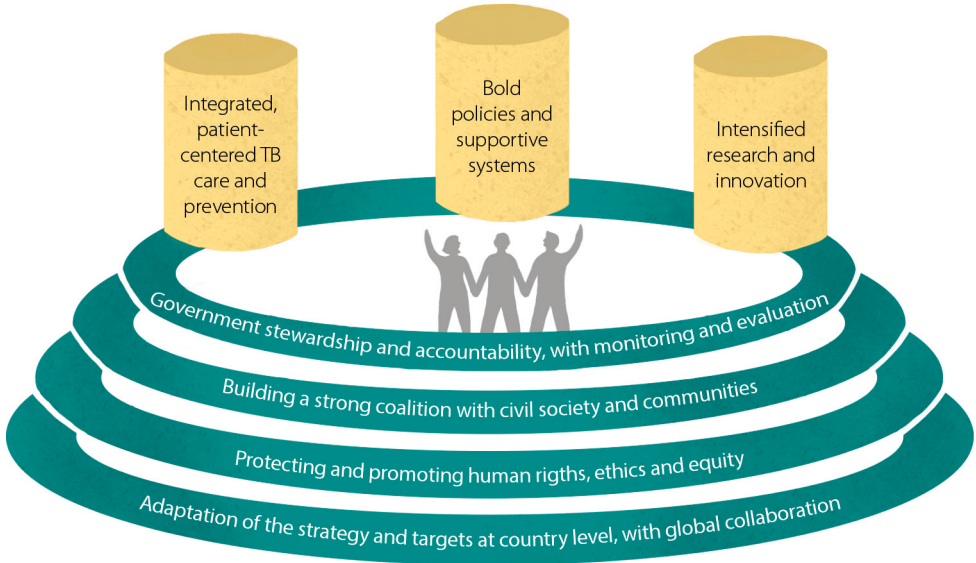
**Source:** WHO. Global Tuberculosis Report 2018

The resolution asks governments to adapt the strategy and implement it, providing the necessary funding and a high-level commitment. Special attention is given to serving populations most vulnerable to infection and with poor access to health care, such as migrants. The strategy and resolution highlight the need to involve

<sup>1</sup> WHA67/2014/REC/1 SIXTY-SEVENTH WORLD HEALTH ASSEMBLY. Available in: [http://apps.who.int/gb/ebwha/pdf\\_files/WHA67-REC1/A67\\_2014\\_REC1-en.pdf](http://apps.who.int/gb/ebwha/pdf_files/WHA67-REC1/A67_2014_REC1-en.pdf)

members from different sectors, in addition to the health sector, such as social protection, labor, immigration and justice.

**Figure 1: End TB strategy of the World Health Organization<sup>2</sup>**



The End TB Strategy has ten components organized into three pillars and four fundamental principles; it requires the rectory of governments, a solid coalition with civil society organizations and communities, an approach based on human rights, ethics and equity, and national adaptation of the strategy and goals.

<sup>2</sup> End TB Strategy. WHO. [https://www.who.int/TB/post2015\\_strategy/en/](https://www.who.int/TB/post2015_strategy/en/)

**Figure 2: Situation of TB in the world<sup>3</sup> and in The Americas<sup>4</sup>**

**TB in the world (2018):**

- 10,0 million people fell ill with TB
- 1,7 million TB deaths among HIV-negative people
- 251.000 deaths among HIV-positive people

**TB in The Americas (2017):**

- 282.000 people fell ill with TB
- 87% of TB cases were found in ten countries
- Incidence rate of 28 x 100 000
- 24.000 TB deaths among HIV-negative people
- 6.000 deaths among HIV-positive people

**Notification of TB cases in the Americas:**

- 228.943 reported cases of TB (new and relapse)
- Case detection gap: 50.000 cases
- 30.000 cases of TB associated with HIV
- 11.000 TB cases of RR-TB or MDR-TB; but only 37% reported, leaving 6.900 RR/MDR-TB cases undiagnosed and untreated.

<sup>3</sup> Global Tuberculosis Report 2019 Available in: [https://www.who.int/TB/publications/global\\_report/TB19\\_Exec\\_Sum\\_15October2019.pdf?ua=1](https://www.who.int/TB/publications/global_report/TB19_Exec_Sum_15October2019.pdf?ua=1)

<sup>4</sup> Tuberculosis in the Americas 2018. Washington, D.C.: PAHO, 2018. Available in: [http://iris.paho.org/xmlui/bitstream/handle/123456789/49510/PAHOCDE18036\\_eng?sequence=1&isAllowed=y](http://iris.paho.org/xmlui/bitstream/handle/123456789/49510/PAHOCDE18036_eng?sequence=1&isAllowed=y)

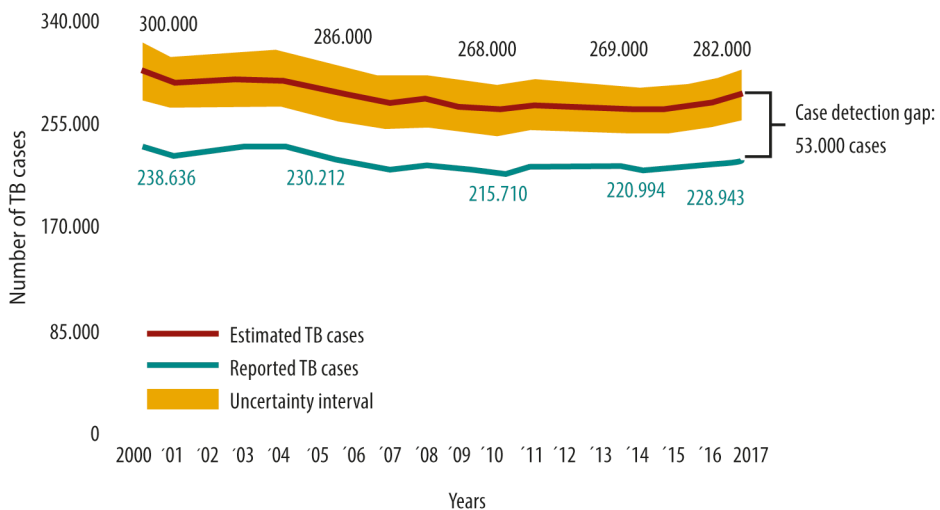


**Table 2: Countries with the highest estimated number of TB cases in The Americas 2017**

N°	Country	Estimated Cases	Percentage of total cases	Cumulativge Percentage
1	Brazil	91.000	32%	32%
2	Peru	37.000	13%	45%
3	Mexico	28.000	10%	55%
4	Haiti	20.000	7%	62%
5	Colombia	16.000	6%	68%
6	Venezuela	13.000	5%	73%
7	Argentina	12.000	4%	77%
8	Bolivia	12.000	4%	81%
9	United States	10.000	4%	85%
10	Ecuador	7.200	3%	87%
Rest of the Americas		35.800	13%	100%
Total		282.000	100%	100%

Source: WHO. Global Tuberculosis Report 2018.

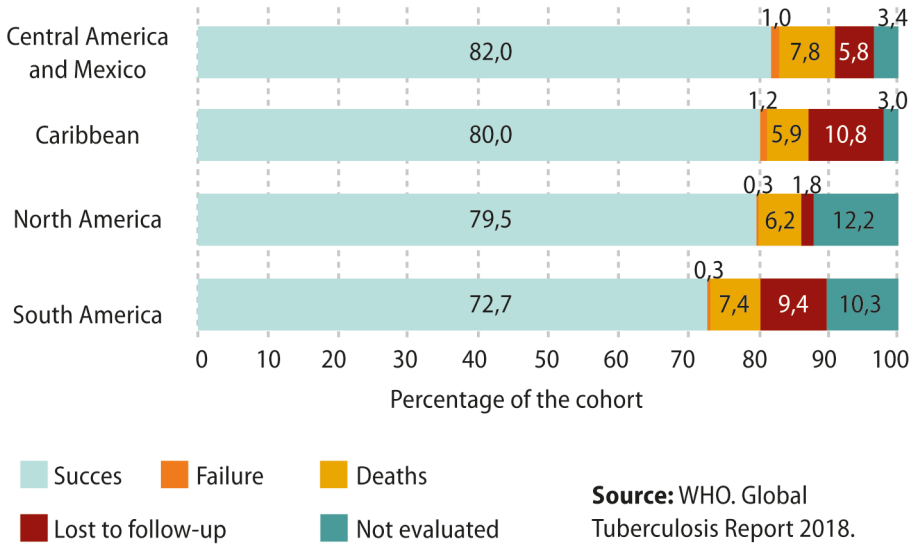
**Figure 3: Trends in the number of estimated and reported cases of TB in The Americas, 2000-2017**



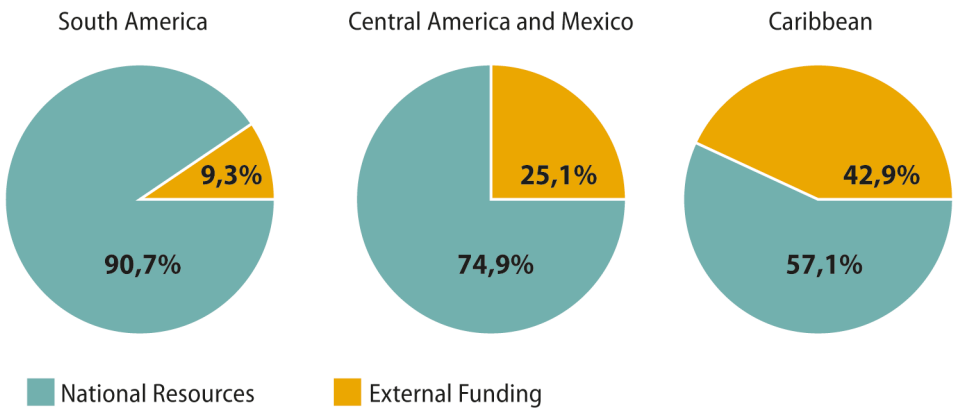
Note: \*New and relapse cases.

Source: WHO. Global Tuberculosis Report 2018.

**Figure 4: TB Treatment outcome, by Subregion. The Americas, 2016**



**Figure 5: Funding source of expenditure for TB diagnosis and treatment, by subregion. Latin America and The Caribbean, 2017**



## Goals of this Study

- Correlate the challenges identified by the study of Systematization of experiences and learning derived from the implementation of the multi country grant, with the development of regional and subregional initiatives that may affect its achievement.
- Present the critical nodes identified by the TB technical teams of the 20 countries, which would require attention from national health authorities and at the international instances.
- Review the potential of regional and subregional integration mechanisms to contribute to the commitments of the End TB Strategy and the Sustainable Development Goals (SDGs)
- **Origin of the information for the analysis**
  - Coordination and orientation meetings with the institutions responsible for the implementation of the grant.
  - Review of documentation of subregional, regional and international scope, prepared in the perspective of attending to the TB component and within the framework for the continuity of the strengthening of the laboratory networks.
  - Observation of technical coordination meetings and workshops organized by the institutions on charge.



# Chapter 1.

Challenges raised and potential for approach through other initiatives

## Chapter 1.

### Challenges raised and potential for approach through other initiatives

➔ The strengthening of the national reference laboratories (NRL) of TB in the Americas, driven by the grant, evidenced a set of needs. Although they were not foreseen in the project, their approach is imperative to optimize the contribution of laboratories to the End Tuberculosis Strategy in each of the 20 countries.

The network of TB laboratories has been strengthened thanks to the update, the incorporation of new methods, the continuity of external quality control, the centralized management of the consent and the purchase of supplies for diagnostic tests. Once the grant is over, the challenge is for laboratories to give continuity to all these processes, so it is necessary to think about advocacy strategies, financing mechanisms and administrative management models.

The challenges mentioned in the study of Systematization of experiences and learnings derived from the implementation of the grant<sup>5</sup> are presented. Those that would be addressed through other initiatives beyond the regional project are highlighted (in bold):

#### • **1.1 The articulation of laboratories to the processes for fighting against TB within the countries**

➔ **In relation to national TB control programs (NTPs) it is necessary that laboratories, as a pillar of them, support and contribute to the construction or consolidation of transverse sample transport systems for all programs, networks and services of health, that respond to the needs and flows in TB and other diseases.**

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<sup>5</sup> Experiences and learning systematization study from the multicountry grant: "Strengthening of the Tuberculosis laboratory network in the Americas". ORAS-CONHU 2019.

The problem of TB requires an effort that articulates the actions of the different actors involved in the diagnosis, care and prevention of TB, for this reason laboratories must be integrated into discussions and areas of intervention in TB along with other programs or health areas.

**Laboratory diagnosis is intertwined with the registration and monitoring of cases. Therefore, laboratories have the challenge of contributing to the design, implementation or improvement of information systems, based on nominal data records and for all vital and health situations, including TB .**

The grant gave a greater role to laboratories in the leadership of national TB networks and expanded the tasks of its staff with the incorporation of new diagnostic methods. However, it is necessary to provide the necessary staff to meet the training, updating and support needs of these national networks, for the implementation of the new methods and to support the improvements of the diagnostic procedures that are already applied.

To be able to extend the use of new methods and the improvement of the diagnostic quality obtained by the reference laboratories, it is necessary to finance and maintain the training supervision carried out by specialists of the SNL of TB to their respective network of national laboratories. Based on this, the advice would be done in cascade within the national networks, according to the attributions and responsibilities of the institution in charge in each country.

## • **1.2 The equipment and strengthening of the new diagnostic methods**

➔ **An important challenge for some countries is to solve infrastructure problems, because they work in minimum biosafety conditions, which affects the quality and timing of diagnoses.**

The grant focused on updating diagnostic methods. Its implementation in different countries has been uneven, some need to prioritize investment in rapid and

molecular methods, with the acquisition of equipment and its inputs, according to WHO regulations and the epidemiological characteristics of each country.

**Likewise, it is necessary to guarantee the preventive and corrective maintenance of the equipment, the updating of software and the certification of biosafety cabinets (BSC) that guarantee an optimal and sustained operation of the laboratory.**

The grant emphasized the training of professionals and technicians in the laboratories, but the acquired expertise needs to be transferred more broadly and sustainably to other members of the laboratory and to the national network, sharing the knowledge and skills acquired through internal training and replications.

### • **1.3 Routes for active management in the face of logistic and bureaucratic obstacles**

➔ **The grant evidenced the need for laboratories to improve the management model for the purchase of equipment and supplies, affecting their respective administrations, so that the procedures correspond to the needs of time and opportunity that the diagnostic process demands.**

**It is necessary to streamline the procedures for authorization of staff to attend training and internships, ensuring that the right people are those who participate. Mechanisms and alliances should be sought to influence the authorities so that the consent is on time and includes professionals with the appropriate profile for each training**

**It was also possible to overcome the logistical problems for the external evaluation of the quality, however, now that it is up to the laboratories and their administrations to carry out the procedures, it is necessary to refine the administrative processes for the transfer of the strains and their clearance, through of an intersectoral political management.**



The international technical advisory visits during the grant were managed by the main recipient or sub-recipients, but normally countries have bureaucratic restrictions for the transfer of professionals and the financing of their exNSPes. It is important to define the modality and procedures for contracting technical assistance and international experts that strengthen the technical processes of laboratories.

The technical assistance visits (TAV) were extremely useful for assessing the quality of laboratories, transferring skills and generating changes, therefore, it is necessary to guarantee the interlocution of the laboratory heads with the national networks during the TAV carried out by the SNLs or PAHO, in order to analyze and improve problems together.

#### • **1.4 Leadership in the political management of Laboratories, beyond its traditional technical role**

➔ **The exchange and cooperation between the laboratories of the network has allowed to some extent boost the development of operational research by its professionals, who comparatively share data and results. This aspect needs to be extended and incorporated as a permanent dynamic so that what is produced by laboratories is better used as a contribution in decision-making on TB control policies.**

The decisions on public policies and the financing of actions towards the end of TB in the countries, require a comprehensive approach that articulates the laboratory diagnosis with health services. However, laboratories are not always present in such discussions, so it is essential to manage their greater participation in decision-making processes such as national strategic plans, negotiations with the Global Fund or budgeting.

As already underlined, diagnostic processes are closely linked to TB reference and care systems, but in many countries the relationship between laboratories and NTP does not flow. It is strategic to improve this articulation to channel existing resources towards the optimization of laboratory diagnoses and make improvements in TB-related health management.

**The investment in the personnel of the RNL and SNL laboratories, through training, internships and refresher courses, has significantly improved the diagnostic capacity, but there is a risk that human resources will be absorbed by the private sector or lose. Therefore, it is essential to develop advocacy strategies so that the available human resources that are trained, qualified and committed are maintained and encouraged.**

WHO directives insist on the need for countries to incorporate the new molecular methods, in order to have timely diagnoses that prevent the spread of the epidemic, however, resistance and doubts about its efficiency have also been generated. It is important to continue promoting these technical debates and to position the importance and the need for investment in the rapid and molecular methods of diagnosis of TB.

The incorporation of new molecular diagnostic methods means a series of changes in the timing of diagnosis and in the procedures that care systems. It is the TB laboratories, in dialogue with the NTPs, that should lead the updating of the algorithms and propose the mechanisms for the improvement of the transfer of samples.

**The teams to develop the rapid and molecular tests, require inputs and materials, which implies additional budgets and high-level management. To guarantee the supply, it is necessary to incorporate them into the budget and manage their acquisition through national GF grants or through governments agreements with PAHO for the acquisition of inputs with subsidized prices through the Strategic Fund, or through joint purchases Regional.**

### **• 1.5 Continuity at the budgetary and operational level of network operation**

**The improvement observed in the TB Laboratory Network rested on the development of the capacities of the members of the RNL and the SNL through internships and courses in centers of excellence. It is essential to**

**give continuity to staff update processes, in addition, because there are constant innovations in diagnostic procedures.**

Regional mechanisms should be defined in the future to generate a permanent update (elaboration, translation and updating of guides and manuals) in the way that won't allow to return to the previous situation of technical delay. These documents not only serve RNL, but are also used for the redefinition of algorithms, training for national networks and standardization of procedures.

**External quality control is central to the improvement of laboratory performance, so each country must ensure the financing of the transfer and clearance of the strain panels sent by the SNL. These, in turn, receive the ITM panels from Belgium. This means solving bureaucratic obstacles within countries, but it also implies the possibility that the management is carried out jointly through existing regional organizations.**

**It is also necessary to explore institutional, group or regional designs to finance and make viable the VAT carried out by the experts of the SNL, and the certification of cabinets.**

**On the other hand, the value of the link with civil society and with the focal points of CARLAC as strategic allies for the sustainability of laboratories and for problem solving is highlighted. The demand and empowerment of the affected population and the opinion of agents with advocacy at the level of the ministerial decision-making bodies make it possible to incorporate improvements and encourage decision makers to invest in the fight for the end of TB.**

During the implementation of the grant, collaborative processes were observed among the RNL, which should be reinforced. In this way the load of the SNL is relieved and allows the network to operate with a certain autonomy, this can be achieved by enhancing virtual and interactive mechanisms. Likewise, it is necessary to maintain the spaces for discussion and exchange of experiences between laboratories, which

facilitate joint learning, building trust and strengthening exchanges to strengthen the functioning as a network.

During the term of the grant, the technical advice developed by the PAHO expert for TB laboratories was key to guide and monitor the changes incorporated in the RNL and SNL. The technical staff in the countries insists on maintaining the designation of a focal point in the PAHO Regional Program to meet the needs of the laboratories of the Americas.

The grant implemented activities equally for RNL, however, the starting point was not the same for all laboratories, so it is necessary to consider special mechanisms to finance those whose infrastructure and resources are in a critical condition, exploring options as donor tables or private contributions.

**It would be convenient to broaden the horizon of resource management at the interministerial level, to make the commitments more sustainable, having to also influence the Ministries of Economy and Finance, or related.**

## **Chapter 2.**

**The challenges and space of other GF grants in Latin America and the Caribbean**

## Chapter 2.

### The challenges and space of other GF grants in Latin America and the Caribbean

➔ A few months after concluding the GF regional grant for the strengthening of TB laboratory networks in the Americas, it would be useful to ask what other initiatives would rest the possibility that the challenges described could be addressed. Table 3 (at the end of this chapter) consolidates the nine national grants in force for the Tuberculosis component within the 20 countries. Table 4 (at the end of this chapter) reflects the regional GF grants in Latin America and the Caribbean for any of the three components (AIDS, Tuberculosis, Malaria). The existence of these projects would provide the opportunity to foster synergies to maintain attention on the importance of laboratory diagnosis and the operation of TB laboratory networks in those countries where GF is present. Undoubtedly, it is vital to articulate TB and HIV control actions. Even as distant as it may seem, it would also be possible to generate access to population groups that benefit from projects focused on malaria control. There are a number of axes that contribute to the improvement of health systems in general and that cross all policies and interventions transversely, such as data records, sample transport systems and reference and case reference, operational research, just to name a few.

Recently a new multi-country proposal was considered in the 2019-2022 Tuberculosis component (Support to LAC countries in the transition of TB financing from the Global Fund). It is entitled "Promote and implement the ENGAGE TB through Civil Society to reduce barriers to access TB services for key populations in 8 countries in the Latin American and Caribbean region"<sup>6</sup> (also called "TB Observation") and is developed by Partners in Health. Started on June 30, 2019, the grant includes five eligible countries (Peru, Bolivia, Haiti, Guatemala, El Salvador), one in transition (Dominican Republic) and two non-eligible (Colombia, Mexico). In addition, Panama, Paraguay and Honduras are involved in some activities as guests. As far as the main objectives of the project have been

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<sup>6</sup> Description of the proposal (in Spanish) available in: <http://conamusa.org.pe/video-webinario-de-plataforma-lac-sobre-proyecto-multipais-de-TB/>

publicly disseminated, an explicit line regarding the strengthening of laboratories is not observed<sup>7</sup>.

In spite of the relative rigidity with which FM projects are managed whenever their budgets, activities and indicators are discussed, defined and agreed upon, there is always a degree of flexibility and a margin for the generation of efficiencies and greater use of resources. available. This does not necessarily mean a saving of money but the extension of the benefits towards the construction of sustainability in the fabric of cross-linking of the various health situations.

Other FM grants, national or multi-country, for any of the three components, could generate spaces for the confluence of actions that also contribute to TB control and the strengthening of diagnostic capacities. For example:

- Training in biosafety and quality management.
- Information systems and data logging.
- Sample transport systems.
- Certification of Biological Safety Cabinets (CSB)
- Use of the multiple molecular diagnostic platform for various pathologies (such as HIV, TB, Hepatitis, through GeneXpert)
- Articulation and coordination between different disease control programs.
- Intersectoral work for the comprehensive approach to the social determination of health.
- Social participation in the formulation and implementation of policies.

TB / HIV collaborative activities began to be implemented in the Americas region since 2005 with support from PAHO's regional TB and HIV / AIDS programs. In the last twelve years, training workshops have been carried out, clinical management guides have been developed, technical advice has been provided and a dozen regional meetings of NTP and HIV chiefs have been held to exchange experiences and monitor the progress of coordination and joint work between TB and HIV in the

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<sup>7</sup> <https://data.theglobalfund.org/investments/grant/QRA-T-PIH/1>

Americas, but there are still major challenges in addressing TB / HIV coinfection in the countries of the region. The operational goals of TB / HIV have not been met and in some cases, there is no complete information available from the countries that allows the situation to be analyzed in a comprehensive manner. Undoubtedly, HIV grants could lead to the construction of confluences between the two programs.

The new WHO guidelines recommend screening for TB in people with HIV, preventive therapy with isoniazid, early onset of antiretroviral therapy and the new diagnostic technology for TB with Xpert MTB-Rif. The expansion of the implementation of collaborative activities with the available tools saves lives; while barriers to access integrated networks of health services based on primary care, adequate quality, timely and equitable affect the care of patients with TB / HIV and require close joint work between the two programs. The best service provision needs to increase the efforts made and direct actions towards the integration of services and improvements in monitoring and evaluation.

In order to continue strengthening the interrelationship between laboratory services for TB and HIV, and to ensure screening and diagnosis of TB in people with HIV, it is necessary to expand and decentralize HIV services to the first level of care, to have the necessary supplies of prevention, diagnosis and treatment of TB and HIV, with emphasis on rapid diagnostic tests for the two diseases (Xpert MTB / Rif) and medications, consider joint procurement of supplies and medications between the two programs, improve the TB and HIV information system in terms of collection, registration and flow, allowing harmonization and approval, strengthen the monitoring and supervision of joint activities and the adherence of patients to treatment, strengthen the reference and counter-referral mechanisms, establish and implement infection control plans of TB at all levels and involve the human resources available in the design of solutions to implementation problems.

The WHO recommendation on the use of Xpert MTB / Rif for the initial diagnosis of TB and MDR-TB in people living with HIV has represented a worldwide advance allowing an opportune diagnosis of coinfection. Ensuring access and sustainability of this technology still represents a challenge for some countries in the region, given



the slow acquisition and the limited number of equipment that exist in several countries.

The most effective way by which these debates could be introduced on the mechanisms to enhance synergy between GF projects, and to which the Regional Grant for the strengthening of TB laboratory networks in the Americas administered by ORAS CONHU would have access as Principal Recipient, is the CARLAC. In this instance there is a dialogue with the focal points of the 20 countries, people who are part of the CCMs, where they are formed, and in those who do not have CCM, there is usually a government representation.

According to the dynamics observed during one of the CARLAC meetings in April 2019 in Panama, it seems that the focal points were not fully involved in their liaison role between the different initiatives in which their country participates. With the exception of a few (Costa Rica, Bolivia, Ecuador and Honduras stand out), there is no optimal appropriation of the importance of weaving collaboration ties beyond the specific activities of each grant.

The CARLAC directive itself should exercise a strategic orientation function in this regard, avoiding monitoring of regional grants separately and through indicators whose compliance would not be affected by the reach of others. Even the presence of CARLAC alone and its arrival at the national levels through its focal points would be a powerful instrument for the construction of technical, political and economic sustainability to avoid the backward movement of the achievements obtained by the implementation of the subsidies. CARLAC could become an ally not only to favor the approach of regional grants to national ones, but also vice versa, since there are many activities in the countries that in the concept notes were constrained to a reduced framework of interventions and that would be enriched very much in line with actions of the multi-country scope.

The Global Fund is withdrawing from countries and regions, urging governments to assume funding for Tuberculosis control. In one of his articles, the epidemiological

report of Córdoba REC-2242 of October 9, 2019<sup>8</sup> highlights: *The enormous impact of current funding deficits for HIV and Tuberculosis is being underestimated, and such an impact is likely to increase, as vulnerable countries have serious difficulties in offsetting the decrease in external financial support with their own funds. In some countries there is a political will to do more, but many of them are not yet ready to assume this responsibility; At least in the short term.*

The article focuses on the report<sup>9</sup> published by Doctors Without Borders (MSF) that demonstrates how the shortage of international funds and insufficient resources of the affected countries already cause gaps in the diagnostic, prevention and care services of HIV and Tuberculosis, as well as a shortage and ruptures of stock of essential medicines.

*In the last decade, great efforts and investments have been made to combat HIV and Tuberculosis, but the reduction in international financing and the recent tendency to transfer the financial burden to the most affected countries jeopardize the great progress achieved so far. In fact, in some countries there could be an epidemic rebound<sup>10</sup>.*

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<sup>8</sup> The shortage of funds for Tuberculosis and HIV jeopardizes the progress made. Epidemiological Report of Córdoba. REC 2,242 October 9, 2019. Available in: <http://www.reporteepidemiologico.com/wp-content/uploads/2019/10/REC-2242.pdf>

<sup>9</sup> "Burden sharing, not burden shifting. How the HIV/TB response is being derailed". October 2019. Available in: <https://www.msf.org/burden-sharing-or-burden-shifting>

<sup>10</sup> Footnote citation 8 (IDEM)

**Table 3: National GF grants in LAC for the TB component. August 2019**

Country	Number	Title	Status	Receptor	Signed (USD)
Bolivia	BOL-T-UNDP	Bolivia - Tuberculosis - PNUD	Active	PNUD	10,710,756
Dominican Republic	DOM-T-MSPAS	Reduction of the incidence and mortality due to Tuberculosis in the Dominican Republic, focusing interventions on key populations and risk groups to end the epidemic in the country	Active	Ministry of Health	12,233,782
El Salvador	SLV-T-MOH	Support for the National Multisectoral Strategic Plan for the Control of Tuberculosis 2017-2021 (NSPMTB) in El Salvador	Active	Ministry of Health	14,043,657
Guatemala	GTM-T-MSPAS	Strengthen the DOTS Strategy in the framework of the New Strategy: Stop Tuberculosis	Active	Ministry of Health	6,522,671
Guyana	GUY-T-MOH	Improve and strengthen Tuberculosis services in key populations of Guyana	Active	Ministry of Health	1,556,594
Honduras	HND-T-UAFCE	Strengthening the End TB Strategy in Honduras	Active	Ministry of Health	11,828,949
Nicaragua	NIC-T-INSS	Nicaragua joined for a sustainable national response in the reduction of Tuberculosis and mortality, with emphasis on vulnerable populations and based on a family and community health model	Active	Nicaraguan Institute of Social Security	12,045,893
Paraguay	PRY-T-AV	Comprehensive care with an intersectoral commitment towards the elimination of Tuberculosis in Paraguay.	Active	Alter Vida - Center for Studies and Training for Ecocodevelopment	17,640,811
Peru	PER-T-SES	Improve the national response to Tuberculosis in priority groups (prisoners, TB-DR, TB / HIV) and strengthen the community system	Active	Partners in Health branch Peru	13,858,066
Total	9 National Grants				100,441,179

**Table 4: Multi Country FM grants in LAC for the three components. September 2019**

Group	Number	Title	Component	Status	Receptor	Signed (USD)
Multi Country Americas CVC-COIN	QRA-H-CVC	Challenge stigma and discrimination to improve access and quality of HIV services in the Caribbean	HIV	Active	Coalition of vulnerable communities in the Caribbean	2,374,134
Multi Country Americas EMMIE	QRA-M-IDB	Regional Malaria Elimination Initiative	Malaria	Active	Inter-American Development Bank	6,000,000
Multi Country Americas ICW	QRA-H-HIVOS2	Positive Leadership Alliance (ALEP) HIV	HIV	Active	Humanist Institute for Cooperation with Developing Countries	10,500,000
Multi Country Americas ORAS-CONHU	QRA-T-ORAS	Strengthening of the Network of TB Laboratories of the Americas	TB	Active	Andean Health Organization - Hipolito Umanue Agreement	6,110,000
Multi Country Caribbean CARICOM-PANCAP	QRA-H-CARICOM	Multi country CARICOM-PANCAP - HIV - Caribbean Community Secretariat	HIV	Active	Caribbean Community Secretariat	5,075,234
Multi Country Caribbean CARICOM	QRA-H-CARICOM2	Consortium CARICOM	HIV	Active	Caribbean Community Secretariat	6,500,000
Multi Country Caribbean MCC	QRB-C-OECS	OECS Strategic response of several countries towards the elimination of HIV / TB	HIV / TB	Active	Organization of Eastern Caribbean States	8,573,999

Group	Number	Title	Component	Status	Receptor	Signed (USD)
Multi Country Central America REDCA	QRC-H-SISCA	Guarantee, through promotional actions, universal access to health care and respect for human rights in the response to HIV for Central America to improve the quality of life of people living with HIV	HIV	Active	Central American Social Integration Secretariat	9,557,398
Multi Country Americas Part- ners in Health	QRA-T-PIH	Promote and implement ENGAGE TB through Civil Society to reduce barriers to access TB services for key populations in 8 countries in the Latin American and Caribbean region	TB	Active	Partners in Health	4,500,000



# Chapter 3.

The challenges and space of regional TB plans and initiatives

## Chapter 3.

### The challenges and space of regional TB plans and initiatives

➤ The entire region of the Americas is covered by the PAHO Regional Tuberculosis Program, since in 1996 it declared the disease as a health priority with the approval of resolution CD 39/20 of the Directing Council, which convened and committed the governments of the countries to apply the DOTS / TAES strategy. Until that year, only six of the 44 countries that make up the region applied the DOTS / TAES strategy at the national level, with a coverage of 9.9% of the population. Between 1996 and 2003, the implementation and subsequent expansion of DOTS / TAES to virtually all countries began, reaching a coverage of 78% of the population of the Americas by 2003. Donor agencies and partners played an important role at that stage. and the joint actions that were developed resulted in the increase of available economic resources for NTP for the implementation and expansion of the DOTS strategy, and for the Regional Program in order to strengthen the technical capacity of the National Programs. However, despite the efforts made, Tuberculosis has continued to produce human suffering and economic losses, so it was decided to deepen its control through new initiatives to stop it and overcome the new challenges produced by the spread of HIV / AIDS, Multidrug-resistant Tuberculosis, increasing inequities and poverty. Those initiatives were outlined in the medium and long term to reduce the burden of disease and achieve the Millennium Development Goals.

The Integrated Tuberculosis and Respiratory Diseases / Practical Approach to Lung Health (AITER / PAL) initiative was approached in early 1998, by WHO. The field experience helped guide development and the implementation methodology allowed the deployment of activities aimed at: **i)** significantly increase the detection of cases of Tuberculosis, **ii)** improve the integration of respiratory care within PHC, **iii)** decrease the prescription of medications, in particular antibiotics and 'adjuvant' medications, as well as the cost of prescription of the medication per patient and **iv)** improve care in patients with chronic respiratory disease.

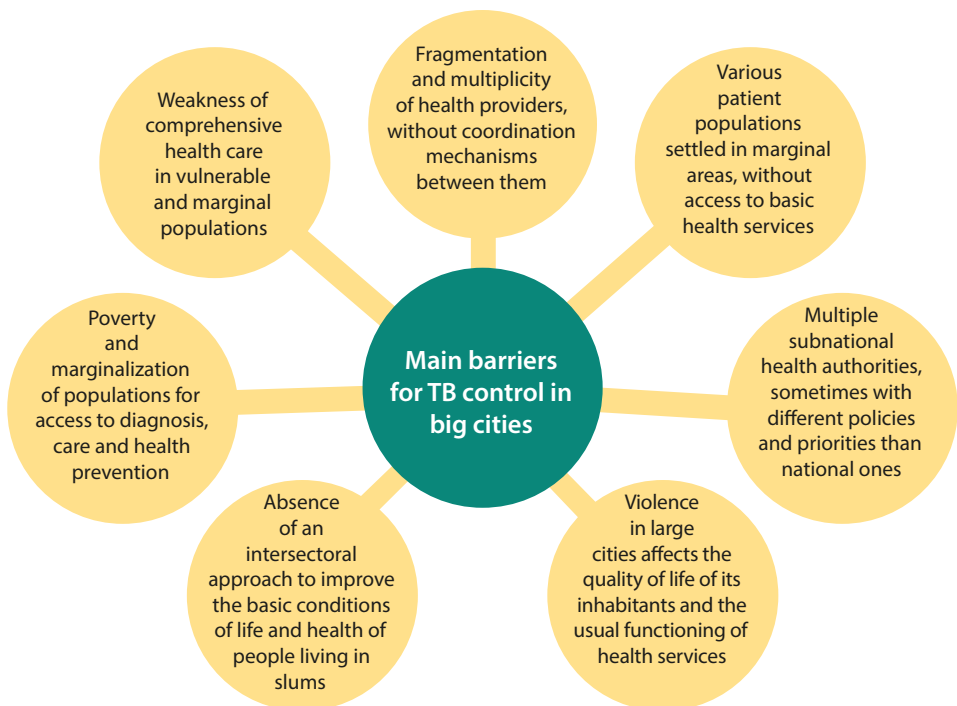
The 46th Session of the Directing Council held in September 2005, adopted Resolution CD46. R12 "Regional Strategy for Tuberculosis Control for 2006-2015", which reaffirmed the commitment of countries to ratify TB control as a priority



in health programs, allocating the necessary financial and human resources, and recommending Regional TB Plan 2006-2015 as the basis for the formulation of national plans, which planned to implement the new WHO strategy “Stop TB”.

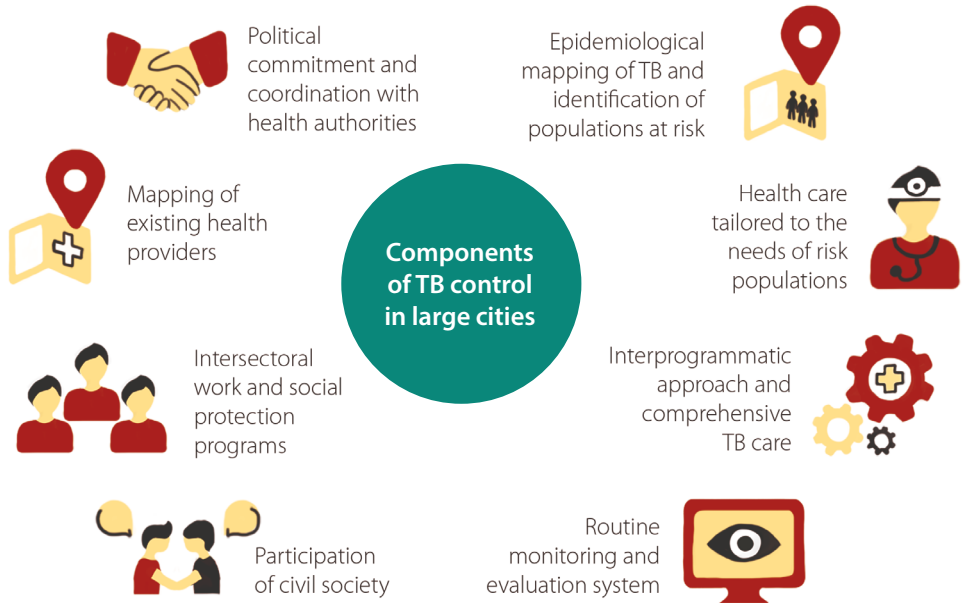
On the other hand, the Pan American Health Organization, with contributions from experts in the region and with the financial support of the United States Agency for International Development (USAID), documented since 2011 experiences on TB in large cities of the United States. region and proposed the TB Control Initiative in Large Cities of Latin America and the Caribbean, which began to be piloted since 2013 in Brazil, Colombia and Peru, with the purpose of supporting countries in strengthening programs of control and attention of social determinants of health through interprogrammatic approaches and articulation with other sectors other than health.

**Figure 6: Barriers for tuberculosis control in large cities**



In these situations, the response has been projected in a spectrum of integrality that allows progress in the cities that participate in the initiative.

**Figure 7: Components of TB control in large cities**



Subsequently, in response to the Global End TB Strategy, the Action Plan for the Prevention and Control of Tuberculosis 2016-2019 was prepared, which was approved by the countries of the Americas at the 54 PAHO Directing Council in September of 2015<sup>11</sup>.

These Regional Plan of Action aims to accelerate the reduction of TB incidence and mortality to move towards the end of the epidemic in the Americas region and proposes three strategic lines of action that take into account the pillars, principles, components, goals and indicators of the Global Strategy:

- a) Prevention and integrated care of TB, focused on people affected by the disease.**

<sup>11</sup> Plan of action for the prevention and control of Tuberculosis. CD54/11, 2015. PAHO.

- b)** Political commitment, social protection and universal coverage of the diagnosis and treatment of TB.
- c)** Operational research and implementation of innovative initiatives and tools for TB control.

Regarding the **laboratory**, the following is proposed in the Plan: **i)** acceleration of the implementation of new technologies; **ii)** strengthening access to bacteriological diagnosis for the general population but especially for populations vulnerable to TB; and **iii)** implementation of routine resistance monitoring.

The countries of the region have been developing or updating their National Strategic Plans (NSP) of TB. The NSP are in full connection with the Action Plan. Its implementation will allow the region of the Americas to reach a disease control situation very close to the stage of completion of the TB epidemic, proposed in the Global Strategy “End of TB”.

Line 1 of the Regional Action Plan responds to Pillar 1 of the “End of TB” strategy and includes the interventions required for prevention, integrated and focused care for TB patients. In order to comply with this strategic line of action, the offer of health care provided for in the Strategy for universal access to health and universal health coverage proposed by PAHO and WHO will be required. **The early diagnosis of drug-sensitive and drug-resistant TB and active detection in risk populations implies the strengthening of the laboratory network that includes the offer of diagnostic tests to the entire population (total coverage), the sample transport network , the information system, the transmission of results to health providers, the quality assurance program of the techniques in use, the ability to incorporate new technologies and coordination with NTPs and service networks<sup>12</sup>.**

As in the Action Plan, the NSP have included the strengthening of the RNL, in their respective countries, with special emphasis on the incorporation of new

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<sup>12</sup> Footnote citation 11 (IDEM)

technologies that guarantee a timely diagnosis of TB, MDR / XDR TB in vulnerable populations. The existence of the NSP represents a challenge for the network of laboratories in the region, so it will require an accompaniment for the fulfillment of regional goals.

In its “Tuberculosis in the Americas 2018” Report, PAHO presents a series of recommendations to accelerate progress towards the End of TB in the region:

- 1.** Improve and / or accelerate the implementation and expansion of early diagnosis with new rapid molecular tests.
- 2.** Promote the study of contacts, mainly in children under 15 years.
- 3.** Accelerate the implementation of shortened MDR-TB schemes and the introduction of pediatric dispersible drugs to improve TB treatment outcomes.
- 4.** Increase work with vulnerable populations and on social determinants with inter-programmatic and intersectoral activities focused on people and the community.
- 5.** Promote special approaches such as the TB Control Initiative in Large Cities, the Parliamentary Front of Tuberculosis and expansion of operational research.
- 6.** Cover existing financial gaps with sustainable resources, reducing dependence on external funds.

After 18 months of elaboration, in September 2019, during the United Nations General Assembly in New York, twelve multilateral organizations<sup>13</sup> presented a joint plan entitled *Greater collaboration, better health: Global action plan for a healthy life and well-being for everybody*. It describes the collaboration that these multilateral instances of health, development and humanitarian aid will initiate in order to be more efficient and better rationalize the support provided to countries in order to establish universal health coverage and achieve the goals of the related SDG with health for the next 10 years.

The document states: Preserving the health of the population is essential for sustainable development and the eradication of poverty, the promotion of peaceful and inclusive societies and the protection of the environment. While significant progress in key areas of health has been achieved in recent decades, the goals set for 2030 will not be achieved if efforts are not redoubled.

For its part, the global report on monitoring universal health coverage, published by WHO recognizes: Universal health coverage is essential to meet health-related objectives and resolve health inequities. If current trends persist, in the world there will be about 5 billion people who will not be covered by essential health services in 2030. To leave no one behind, countries have to fight health inequities. Improving collaboration and coordination can help them cope with complex health problems and provide innovative solutions.

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<sup>13</sup> Los 12 organismos signatarios del plan son: la Alianza Gavi para las Vacunas (Gavi); el Mecanismo Mundial de Financiamiento (GFF); el Fondo Mundial de Lucha contra el Sida, la Tuberculosis y la Malaria; el Programa Conjunto de las Naciones Unidas sobre el VIH/Sida (ONUSIDA); el Programa de las Naciones Unidas para el Desarrollo (PNUD); el Fondo de Población de las Naciones Unidas (UNFPA); el Fondo de las Naciones Unidas para la Infancia (UNICEF); el Mecanismo Internacional de Compra de Medicamentos (UNITAID); la Entidad de las Naciones Unidas para la Igualdad de Género y el Empoderamiento de las Mujeres (ONU-Mujeres); el Grupo Banco Mundial; el Programa Mundial de Alimentos (PMA); y la OMS.

Together, the contribution of the twelve agencies represents a third of all development assistance for health. Within the framework of the Global Plan of Action, the agencies undertake to strengthen their collaboration to:

- Work better with countries to define priorities, and assume planning and execution together;
- Accelerate the progress of countries through joint actions in seven areas of acceleration that pose common challenges in many countries and in which the mandates, knowledge and resources of agencies offer solutions: **1)** primary health care; **2)** sustainable health financing; **3)** community and civil society participation; **4)** determinants of health; **5)** innovative programming in fragile and vulnerable environments and to respond to disease outbreaks; **6)** research and development, innovation and access; and **7)** data and digital health. They will also work together to promote gender equality and the contribution of global public goods;
- Harmonize their operational and financial strategies and policies in support of countries to increase efficiency and reduce the burden on them;
- Accountability, examining progress and learning together to improve joint accountability.

La cuestión del financiamiento ha pasado a ser una de las mayores preocupaciones de los organismos internacionales, pues los presupuestos no van a la par de la necesidad de acelerar las intervenciones planteadas para alcanzar los hitos de la Estrategia Mundial Fin de la TB.

**Figure 7: Financing gaps that impede progress to End TB<sup>14</sup>**



<sup>14</sup> [https://www.paho.org/hq/index.php?option=com\\_docman&view=download&category\\_slug=infografias-8361&alias=48068-dia-mundial-de-la-Tuberculosis-2019-infografico-pdf-las-brechas-de-financiamiento-impiden-el-progreso-para-poner-fin-a-la-TB&Itemid=270&lang=es](https://www.paho.org/hq/index.php?option=com_docman&view=download&category_slug=infografias-8361&alias=48068-dia-mundial-de-la-Tuberculosis-2019-infografico-pdf-las-brechas-de-financiamiento-impiden-el-progreso-para-poner-fin-a-la-TB&Itemid=270&lang=es)





## **Chapter 4.**

**The challenges in Central America and  
the space of the REDLAB of COMISCA**

## Chapter 4.

### **The challenges in Central America and the space of the REDLAB of COMISCA**

➔ The Council of Ministers of Health of Central America and the Dominican Republic (COMISCA) is a subsystem of Social Integration of the Central American Integration System (SICA), which is consolidated in the Summits X, XI and in the XVI of 1995. Its rectory is commissioned of the health sector, based on the construction of an agenda and a Central American Health Plan.

The COMISCA identifies health problems, the importance of which requires a multi-country approach to a sustainable solution. The Council has the capacity to raise this agenda to the Summit of Presidents to develop regional health initiatives or generate an intersectoral response<sup>15</sup>.

Line of Action 14.4 of the Health Plan of Central America and the Dominican Republic 2015-2020<sup>16</sup>, stipulates that “regional or international collaborative networks should be promoted for the development of clinical diagnoses of the prevalent diseases in the Region”.

At the initiative of the Executive Secretariat (SE-COMISCA), the Network of Public Health Laboratories of Central America and the Dominican Republic (REDLAB) was formed in 2012<sup>17</sup>, as an operational structure to improve response capacities in situations of public health emergency in the region, strengthening surveillance, the exchange of reliable information, quality and safety, technological, technical and managerial capacity and research.

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<sup>15</sup> Resolution 03-2018 Creation of complete Regional Operational Instances. (Spanish) Santo Domingo: SE-COMISCA. 2018

<sup>16</sup> Central American and Dominican Republic Health Plan (2016-2020). (Spanish) San Salvador: SE-COMISCA. 2016

<sup>17</sup> Act of constitution of the regional network of national reference laboratories in Central America and the Dominican Republic. (Spanish) Tegucigalpa: SE-COMISCA. 2012

In relation to operation REDLAB is organized with the participation of each of the national laboratories (among them, those of national Tuberculosis reference) represented by their directors and the directors who are named in their replacement<sup>18</sup>. The network is chaired by the laboratory of the country that holds the pro tempore presidency of COMISCA<sup>19</sup>.

REDLAB takes agreements by majority, which are then channeled through the Executive Secretariat, which includes them in the agenda of COMISCA meetings. Likewise, it prepares an annual work plan.

Ten functions for REDLAB are stipulated that consist of improving and strengthening laboratories in terms of:

- The ability to monitor and respond
- Human resources development
- Information exchange
- The harmonization of standards and protocols
- The quality and safety of services
- Evaluation and validation of equipment and supplies; Access to equipment, reagents and supplies
- Access to experts and technologies
- Prioritization of health problems
- The exchange to improve epidemiological characterization
- Management of cooperation resources
- Network financing management
- Promoting scientific research.

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<sup>18</sup> REDLAB brings together public health laboratories of national public reference. It does not include all existing laboratories in the countries. In some, the drug analysis function is not found in laboratories of public health participating in REDLAB. Therefore, the management of joint purchase of medicines and supplies requires additional coordination.

<sup>19</sup> Operation manual: regional network of national reference laboratories in Central America and the Dominican Republic (REDLAB). (Spanish) San José: SE-COMISCA. 2017

The SE-COMISCA laboratory specialist is responsible for coordinating REDLAB meetings. In addition, there is a biannual presidency that leads the discussions, depending on the country that corresponds.

REDLAB does not have an umbrella project or specific budget for the development of initiatives proposed by the members of the network, but manages external funds for the collective strengthening of laboratories.

The concerns addressed by REDLAB are similar to those that concern the network of Tuberculosis laboratories in the Americas, focused on improving the opportunity and quality of laboratory diagnosis.

Since June 2019 REDLAB has a resolution COMISCA 15-2019<sup>20</sup>, which addresses the sustainability of Public and Clinical Health Laboratories. The resolutions of COMISCA generate a commitment of strict compliance for the member countries.

However, the resolution does not specify precisely what the mechanisms in which the strengthening of the network will be translated. Instead, the resolution of COMISCA 11-2019<sup>21</sup> which stipulates support for national TB laboratories does specify the mechanisms of sustainability and the allocation of financial resources without affecting the own funds of the laboratories. In addition, it prioritizes financing areas such as: external quality control, panel dispatch, technical assistance visits and internships.

At its November 2019 meeting<sup>22</sup>, REDLAB approved agreements that establish the mechanisms and procedures to guarantee the necessary resources, which are derived from resolution COMISCA 15-2019.

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<sup>20</sup> Resolución 15-2019 Sostenibilidad de Laboratorios de Salud Pública. (Spanish) Ciudad de Guatemala: SE-COMISCA. 2019

<sup>21</sup> Resolución 11-2019 Sostenibilidad del PEED en los Laboratorios de TB de la región SICA. (Spanish) Ciudad de Guatemala: SE-COMISCA. 2019

<sup>22</sup> Meeting of the regional network of national reference laboratories in Central America and the Dominican Republic. November 06 - 07, 2019. (Spanish) San Salvador: SE-COMISCA. 2019

The strategy envisaged is to bet on making the resolution viable through financing with national funds; but above all to resort to the management of external cooperation projects or with international partners such as the Center for Disease Control (CDC).

For REDLAB, the experience of TB laboratories can serve as a model and lessons learned to solve problems common to all laboratories. As expressed in the systematization of the subsidy, the work of the TB laboratory network allowed to open new routes and consolidate mechanisms to improve the administrative management, advocacy and technical strengthening of laboratories, which can be very useful for the REDLAB

Likewise, the FM grant has left installed capacities, human resources and molecular diagnostic equipment that are used for the diagnostic activities of the other laboratories. In fact, in the agreements of the November 2019 meeting, REDLAB agreed to request the support of personnel, formed in the three years of the regional grant, for the certification of the booths of the National and Mexican TB SNLs. Biosafety In the short term, it is evident that booth certification support could be extended involving TB laboratories.

In the medium term, the Tuberculosis laboratory network can find in REDLAB an important mechanism for the improvements required in infrastructure, human resources or equipment that are not contemplated in COMISCA resolution 15-2019. Likewise, the link with the SE-COMISCA allows access to the political will necessary for such investments.

REDLAB develops each year an Annual Operational Plan that is mandatory for member countries. Since 2019, the POA includes 9 indicators that are derived from the Health Plan of Central America and the Dominican Republic (2016-2020) and that are maintained by the year 2020. These indicators converge with the challenges described in Chapter 1 after systematization of the multi-country subsidy to strengthen the network of laboratories in the Americas and can be observed in the following relationship:

- Training of personnel specialized in equipment calibration
- Biosafety Booth Verification
- External Performance Evaluation Programs (PEED)
- Incorporation of new diagnostic methods

In addition, at the November 2019 meeting, other needs of REDLAB were discussed, which are confluent with the needs of the network of Tuberculosis laboratories of the Americas that are not reflected in the Annual Operational Plan:

- The joint purchase of reagents and supplies
- The increase in human resources.
- The specialized technical assistance
- Monitoring and resource management of resolutions 11-2019 and 15-2019

We observe, then, that both REDLAB's concerns and its joint work share similar problems as the TB laboratory network of the Americas. Therefore, it is feasible that the countries of the TB network support the continuity of their strengthening within the framework of REDLAB, because a large part of the critical nodes they have for their development are the same as those experienced by Health laboratories Public of Central America. However, the interest of REDLAB is to support Public Health laboratories and not a specific type of laboratory.

Therefore, a more intense articulation process is required among the TB laboratories of the countries of Central America to define joint agendas and processes that give continuity to the strengthening promoted by the GF grant.

Currently the design of the TB laboratory network is set to star. In other words, PAHO, the SNL or the subsidy itself, nucleating, articulating and stimulating the functioning of the network. It is necessary to move to another network model that works more horizontally.

In this way, TB laboratories could have a dialogue with REDLAB or manage funds directly from the cooperation for strengthening via SE-COMISCA. Otherwise, bet only on the TB laboratory to have an impact on the public health laboratory of your

country, it can cause your demands to be diluted together with the other national laboratories, blurring the specialized strengthening required for TB.

It would be helpful to hold regional meetings that strengthen TB laboratories and allow them to develop a joint regional strengthening strategy in coordination with SE-COMISCA and REDLAB. In these meetings, regional projects for strengthening TB laboratories can be discussed, since many of the countries in this subregion are eligible for cooperation funds.

In the area of COMISCA, an instance that properly articulates the efforts to fight Tuberculosis has not been created. There is a Regional Coordinating Mechanism (MCR), but it addresses HIV and Malaria. On the other hand, there are also Technical Groups, but none of them is dedicated to TB.

It is possible that at the moment the level of articulation, exchange and agenda in common is more advanced in the TB laboratories of Central America than in REDLAB, this due to the investment developed by the Global Fund grant, operated by ORAS-CONHU, SE-COMISCA and PAHO.





## **Chapter 5.**

**The challenges in South America and the space of the Andean Tuberculosis Plan and the Institutional Strategic Plan of ORAS CONHU**

## Chapter 5.

### **The challenges in South America and the space of the Andean Tuberculosis Plan and the Institutional Strategic Plan of ORAS CONHU**

➔ In 2017, Resolution REMSAA XXXVI / 514 opened the framework for the creation of a Working Group on Tuberculosis for the Andean region. Among its first actions was the filling of a form for the collection of information that served as a starting point for the identification of critical nodes among the components of the End TB Strategy in the countries of the subcontinent. At the Technical Meeting of Lima in September 2017 (convened by the Regional TB Grant and with the presence of the chiefs of PNT and the heads of reference laboratories) the consolidation of the responses provided by various countries was presented.

The meaning of the subsequent discussions has been aimed at strategically guaranteeing political support from the highest health authorities for the sustainability of the actions carried out in the area of the GF grant, and for the fulfillment of the commitments within the End TB Global Strategy, with ORAS CONHU as articulator of joint health policies in response to common problems in the Andean area.

At the time, the approaches of this recently formed group reiterated the need to statistically make visible the real situation of vulnerable populations or groups and guarantee universal access in the region for people with TB. They also stressed the importance of considering the issue of the unregulated sale of anti-TB drugs and the consequences this has for antimicrobial resistance. It was warned that, in terms of research, it continues to depend on foreign standards, being a challenge the strengthening of research in TB from the academy with intersectoral expansion, so it would be convenient to reactivate the network of public health institutes. It was also pointed out that civil society should be more involved with direct participation of people, and rethink the non-exclusively economic resources available to communities to get involved in the control of TB. It was also said in the September 2017 appointment that, although TB is an old disease, co-infection with HIV repositions it as an entity linked to marginalization. It is not just a problem

of clinicians, infectologists, laboratories, so a multidisciplinary approach should be deployed.

Other interventions were: **a)** TB is a public health problem, DOTS is designed so that the patient is treated individually and does not transmit the disease collectively, but adherence implies that the system must accommodate the patient and not vice versa; being the most difficult in culturally diverse populations, or when TB and addiction are associated because people with addictions find it difficult to sustain an interest in healing, which makes their approach very complex, more than for other vulnerable groups. **b)** Chile has a manual for TB in persons deprived of liberty (PPL). It is a process that is beginning, entails changing the culture of the prison health system. The country makes them available to the rest of the Andean area. **c)** It would be very convenient to consider the joint purchase of medicines and supplies for TB. **d)** Different sectors and ministries must be involved. "It seems that in our countries we have the same problems, we need greater political commitment to reach the goal of the Global Strategy. Education in TB must be developed through communication, health promotion, population empowerment", said one of the participants.

At the conclusion of the meeting, the strategic lines of what the Andean Tuberculosis Plan would become: **A-** Interculturality: migrant populations and borders. **B-** Intersectoral approach to TB in vulnerable populations: addictions, street dwellers, PPL (linked to the PAHO TB initiative in large cities and a defined articulation plan with the other sectors). **C-** Joint acquisition of medicines and supplies. Active pharmacovigilance. All these axes would be based on transversal principles: to maintain universal and free access to the diagnosis and treatment of TB; and carry out the interventions with the technical support of PAHO.

Already in 2018 the countries of South America that participate in the regional GF grant managed by ORAS CONHU, were maturing and profiling the projection of the Andean Tuberculosis Plan 2019-2025. But it was not until the meeting in July 2019 that the proposal was discussed and approved in the city of La Paz, Bolivia (Annex 2) The Andean Tuberculosis Plan raises two general and nine strategic objectives. Next,

those that would serve directly as a space to continue strengthening the laboratory network are highlighted:

- Ensure timely diagnosis and access to susceptibility tests of the population in the border areas.
- Perform the external evaluation of the quality of the diagnostic methods used in Tuberculosis laboratories.
- Perform technical assistance to national laboratories by reference laboratories.
- Perform the internships of the national laboratories staff in the reference laboratories.
- Guarantee the annual certification of the SBC used in the diagnosis of TB in the region.

In 2018, before the call of the GF for the presentation of Multi country proposals, ORAS CONHU developed a new one under the title: “FRON-TB: TB Control in populations originating in Andean and Amazonian borders. Strengthening national responses with a community intercultural approach”, which included two countries eligible for GF (Peru and Bolivia) and one not eligible (Venezuela). In addition, it involved the invitation to participate in activities in Paraguay, Chile, Colombia and Ecuador.

The proposal is based on the fact that five of these countries exceed the average incidence of tuberculosis in the continent: Bolivia (121.2x100,000), Peru (117.9x100,000), Ecuador (52 x100,000), Colombia (31.1 x100, 000) and Venezuela (28.5x100.00). There are populations in which the rates associated with the incidence of tuberculosis remain high and therefore do not allow the achievement of the SDG targets. These are the native indigenous and Afro-descendant communities of the Amazonian and Andean borders.

In general, the incidence of tuberculosis in indigenous populations doubles or triples the national average in all countries included. For the entire area of intervention

considered, it should be noted that many native peoples live in areas of the Amazon region of Bolivia, Colombia, Ecuador, Paraguay, Peru and Venezuela, or in the high Andean areas that reach the Chilean Andes focusing primarily on areas bordering and entering places of difficult access.

Despite the vulnerability risks that exist at the borders, very few studies have been carried out to know the real state of the TB situation in the area.

In the Andean subregion, border work has begun to take on relevance and has allowed the generation of integration actions trying to improve epidemiological surveillance systems, reference and counter-reference systems, facilities for the education of vulnerable populations, training of health personnel and development of regulations for its development.

In this context, the GF would have represented a financing opportunity to develop and implement actions aimed at complementing the actions already planned by the National Programs for the Prevention and Treatment of TB in special populations such as the Andean and Amazonian indigenous people. Greater technical and managerial capacity could have been generated at the national levels for a better development of innovative strategies aimed at knowledge and control of TB in hard-to-reach populations. But the proposal was not selected, mainly because of the "limited" scope of intervention, by formally involving only three countries.

However, the project is written and budgeted. The need that motivated its development remains in force. It is an ethical responsibility to continue developing efforts to apply to other sources of financing that allow the objectives set.

The main elements of the FRON-TB proposal are rescued below, as an incitement not to abandon these perspectives and that the technical teams have that input to propose new initiatives or introduce elements that enrich ongoing projects or to be initiated.

- **Goal of the FRON-TB Regional Grant, proposed in 2018 to the GF:**

Reduce the incidence of tuberculosis in populations originating in the Andean and Amazonian borders through the strengthening of community systems for the extension of social protections with an emphasis on the comprehensive approach to TB, as a contribution to national disease control.

- **Objectives of the Regional Grant FRON-TB, proposed in 2018 to the GF:**

- Carry out the comprehensive epidemiological and sociocultural analysis of the situation of Tuberculosis in communities of populated border points of the participating countries.
- Apply a system of information and nominal data registration with the inclusion of variables that express the ethnicities and socio-cultural characteristics of the native and Afro-descendant populations of Andean and Amazonian borders.
- Systematize and promote the generation of successful experiences of integral, intercultural and intersectoral approach in native border towns, which complement the DOTS strategy of the National TB Control Programs.

**Activities proposed for the execution of the Regional Grant FRON-TB, proposed in 2018 to the GF:**

1. Rebuild multisectoral scenarios of participation and joint work between communities, local government authorities and the private sector concerned, for the design and implementation of community systems that empower indigenous populations of the Andean and Amazonian borders in the exercise of their rights and access to health services.

- 2.** Measure the impact of TB on the Amazonian and Andean indigenous population in the countries of the Andean subregion and characterize the situation of health service networks in these areas and access barriers.
- 3.** Establish the anthropological parameters of the Amazonian and Andean indigenous populations against TB in each of the selected countries.
- 4.** Update existing gaps for access to TB prevention and care in Amazonian and Andean indigenous peoples of the selected countries, by improving national registries with ethnic differentiation.
- 5.** Identify and propose innovative strategies for compliance with DOTS in the indigenous population that includes the active participation of the Amazon and Andean community of the subregion in the management of the affected person and their contacts.
- 6.** Develop and execute an update plan for TB prevention and management with a cultural approach for personnel working at borders and with indigenous peoples.
- 7.** Prepare and execute a health education plan on TB aimed at health promoters of the Amazonian and Andean indigenous peoples of the selected countries, to participate in awareness raising activities and integral activities in response to the TB situation.
- 8.** Strengthen the organization and active participation of indigenous peoples in the exercise of the right to health with emphasis on TB, as well as coordinated work between local government authorities, entities linked to the territories, and those responsible for the Ministries of Health and Protection of Indigenous Peoples of the countries of the subregion to optimize interventions in favor of their health.

Finally, during the 2019 technical meetings (June in Antigua Guatemala for the Mesoamerican area; September in Buenos Aires for the South American area), the reality of work in TB control is described by the technical teams as follows:

- The national reference laboratories of TB and those that make up the heads of regional / departmental / provincial networks, have stable professionals and technicians, with a lot of experience in the service and committed to the usefulness of their work.
- The closer to the territorial bases of the networks, the more changing the staff and the less the possibility of stable contracts and the use of training.
- In general, new professionals and health technicians are not attracted to work on the issue of tuberculosis, for various reasons: stigma and discrimination associated with the disease, their perception as a field of relative little research development and with Traditional approach through vertical programs without greater visibility in the ministries, the perception of the risk involved in the manipulation of the infectious agent.
- Almost all countries identify the lack of personnel or their high turnover as a limitation for tuberculosis control, this being a problem dependent on political decisions that go beyond the reach of technical teams.
- In low incidence countries, medical professionals do not think of tuberculosis among the first diagnostic options for a person with respiratory syndrome for 3 weeks or more.
- The absence of operational research in tuberculosis laboratories reduces the power of professionals and technicians to improve their performance by translating the meaning of their work and the data they produce.



## • Conclusions:

- The network of Tuberculosis laboratories of the 20 countries of the Americas participating in the Regional Grant of the Global Fund 2017-2019, managed by ORAS-CONHU as RP and by COMISCA and PAHO as SR, has been strengthened. The technical teams recognize that they have developed a fruitful dynamic of exchanges between the LRN and SNL, technical assistance, updates, external evaluation of the quality of the diagnosis and improvement of their capabilities.
- There are advances in Central America and the Andean subregion in terms of the political and economic sustainability of the achievements made by the network of tuberculosis laboratories. The Ministers or Secretaries of Health of the aforementioned sub-regional blocs have issued resolutions that support the operation of the Tuberculosis laboratory network and their respective budget allocation.
- The technicians are concerned about the continuity of the work at the conclusion of the Regional Grant of the Global Fund 2017-2019, so it is important to visualize the possible routes to attend the Tuberculosis laboratory component with the required priority within other related initiatives.
- The PAHO Regional Tuberculosis Program and the TB Initiative in Large Cities, has a feasible space for the laboratory component.
- Those countries where there is still a Global Fund presence, through national or Multi-country grants, would have the possibility of taking advantage of resources in actions compatible with the approved concept notes, which many contain the laboratory component.
- In Central America, the existence of the Regional Network of National Reference Laboratories (REDLAB), is the technical umbrella that would promote the necessary advocacy to comply with the indicators of the external program of evaluation of the tuberculosis laboratory performance, equipment maintenance,

SNL technical advice and staff training. There is also a favorable gap for the joint negotiation of laboratory supplies.

- In the Andean area, the ORAS-CONHU has a strategic line of Tuberculosis, a technical Group formed by mandate of the Ministers of Health and an Andean Plan of Tuberculosis 2019-2025, with emphasis on laboratory. All of them are mechanisms that will guarantee the monitoring of established agreements. Additionally, there is a history of having submitted to the Global Fund a proposal for a Multi-Country Tuberculosis project, which includes the improvement of laboratory diagnostic capabilities in border areas. Despite not having been selected, the evidence summarized and analyzed for its preparation, and the validity of the objectives pursued, the document deserves to be retaken to apply to funds from other sources of financing. With this, the peripheral laboratories of the national Tuberculosis networks would also benefit.





# Annex

## APPENDIX 1: Matrix for the identification of critical nodes in the fight against tuberculosis

Country	Pillar	1. Integrated care and prevention focused on the patient						
.....	Component	A. Early diagnosis of TB, including anti-tuberculosis sensitivity tests and systematic screening tests in contacts and high-risk groups				B. Treatment of all people with tuberculosis, including drug-resistant cases, and patient support		
	Activities	Achieve early detection of TB	Detect all drug-resistant TB cases	Expand the introduction of new diagnostic tests	Implement systematic screening of TB in certain high-risk groups	Treat all forms of drug-sensitive TB	Treat all drug resistant TB cases	Strengthen the ability to treat drug resistant cases
Critical Nodes	General Urban Population							
	General Rural Population							
	General Indigenous Population							
	High risk population. Specify							
	At the Border level							
	In emergency contexts							
	Others							

			C. Collaborative activities in relation to tuberculosis and HIV, and treatment of comorbidity			D. Prophylaxis for people at high risk and vaccination against tuberculosis	
Address the problem of childhood TB	Integrate TB care into maternal and child health services	Incorporate patient-centered support to the treatment of TB	Expand collaboration with HIV infection programs.	Integrate services against TB and HIV infection.	Treat TB, associated morbidity and noncommunicable diseases at the same time	Expand the preventive treatment of people who have a high risk of contracting TB	Continue vaccination with BCG in countries where the prevalence is high

Country	Pillar	2. Audacity policies and support systems					
.....	Component	A. Political commitment, with sufficient resources for tuberculosis care and prevention		B. Participation of communities, civil society organizations and professionals from the public and private sectors		C. Universal health coverage policy and regulatory frameworks for notification of cases, civil registration, quality and rational use of medicines, and infection control	
	Activities	Design ambitious national strategic plans.	Mobilize sufficient resources	Involve the community and civil society	Expand public-private approaches and promote international TB treatment standards	Fast forward to universal health coverage	Strengthen regulatory frameworks
Critical Nodes	General Urban Population						
	General Rural Population						
	General Indigenous Population						
	High risk population. Specify						
	At the Border level						
	In emergency contexts						
	Others						



D. Social protection, poverty alleviation and action on other determinants of tuberculosis							
Implement mandatory notification of TB cases	Ensure that civilian death registrations include TB deaths	Regulate the production, quality and use of diagnostic means of TB and TB medicines	Apply complete infection control measures	Relieve the economic burden associated with TB	Expand social protection coverage	Fight against poverty and associated risk factors.	Apply approaches that incorporate health in all policies

Country	Pilar	3. Intensification of research and innovation			
.....	Component	A. Discovery, development and rapid application of new instruments, interventions and strategies			
	Activities	Development of a rapid diagnostic test for tuberculosis at the consultation site	Develop new drugs and regimens for the treatment of all forms of tuberculosis	Strengthen research to detect and treat latent infections	Try to get an effective tuberculosis vaccine
Critical Nodes	General Urban Population				
	General Rural Population				
	General Indigenous Population				
	High risk population. Specify				
	At the Border level				
	In emergency contexts				
	Others				

B. Research to optimize application and impact, and encourage innovations				
Invest in applied research	Use research to inform and improve execution	Create an environment conducive to research	Strengthen research investments	Undertake research to eliminate tuberculosis

## APPENDIX 2: ANDEAN PLAN TO FIGHT TUBERCULOSIS 2019-2025 (Spanish only)

Grupo de Trabajo de Tuberculosis La Paz 7 de junio 2019

### PLAN ANDINO DE LUCHA CONTRA LA TUBERCULOSIS 2019 - 2025

#### ACCIONES DE GESTIÓN:

Establecer un equipo de trabajo Ministerios de salud Perú- Bolivia –Chile-Ecuador-Colombia-Venezuela

#### Actividades

1. Conformar el equipo de coordinación y de trabajo internacional:

Direcciones de salud fronteras: Perú (Puno, Tumbes, Cajamarca, Amazonas, Loreto, Piura y Tacna); Bolivia (La Paz - Pando, Oruro-Potosi ) y Chile (Arica – Iquique, ), Ecuador (Zona 1 y Zona 7), Colombia ( La Guajira, Cesar, Norte de Santander, Arauca, Vichada, Guainia, Vaupes, Amazonas, Putumayo, Nariño), Venezuela ( Zulia, Tachira, Apure y Amazonas)

2. Elaborar el Directorio de los involucrados: funcionarios y equipos locales. Tarea para cada país.
3. Reuniones de trabajo de programación y evaluación a nivel nacional y regional (Perú, Bolivia, Chile, Colombia, Ecuador y Venezuela).

#### OBJETIVOS GENERALES

- A. Elaborar el plan andino dirigido al manejo de Tuberculosis en fronteras en el marco de la estrategia FIN A LA TB, con la finalidad de establecer los planes binacionales.
- B. Garantizar la sostenibilidad de las intervenciones del laboratorio en el "aseguramiento de la calidad" de los métodos de diagnósticos en tuberculosis

#### OBJETIVO ESTRATEGICO A.1:

Inicio oportuno del tratamiento de tuberculosis en todas sus formas, en la población migrante y residentes que accede a los establecimientos de salud de las zonas fronterizas, fortaleciendo la atención integral, centrado en la persona afectada por tuberculosis.

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Estrategia de intervención 1.1: Atención integral del sintomático respiratorio

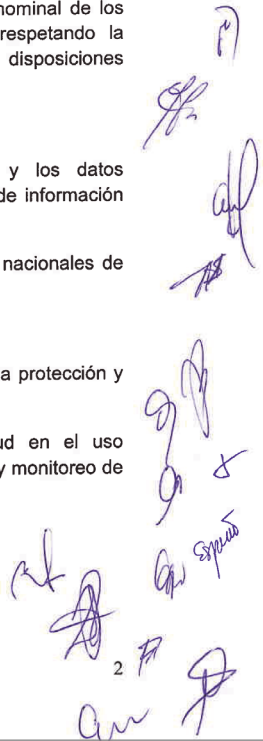
Actividades

1. Elaborar flujograma de atención del sintomático respiratorio (SR) de acuerdo al contexto de cada zona fronteriza.
2. Consensuar e implementar el flujograma de atención del SR en los países fronterizos.
3. Garantizar un área adecuada recolección de muestras y manejo correcto, embalaje, y transporte de muestras.
4. De acuerdo al algoritmo nacional/normativa de cada país asegurar el acceso a pruebas de susceptibilidad a drogas anti-tuberculosis

Estrategia de intervención 1.2: Optimización del sistema de información nominal de los casos de TB a través de los sistemas de información nacionales, respetando la confidencialidad y la protección de la información, de acuerdo con las disposiciones legales vigentes en cada país.

Actividades

1. Incorporar las variables nacionalidad, etnia, padrón nominal y los datos consignados en la ficha internacional de referencia en el sistema de información nacional de cada país.
2. Desarrollar una plataforma de interoperatividad entre los sistemas nacionales de información de cada país fronterizo.
3. Establecer los procedimientos de envío de información internacional.
4. El sistema debe cumplir los requisitos de seguridad vigentes para la protección y confidencialidad de la información.
5. Asistencia, técnica, supervisión, monitoreo al personal de salud en el uso adecuado del sistema de información nacional, para el seguimiento y monitoreo de casos.



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**OBJETIVO ESTRATEGICO A.2:** Incrementar el éxito del tratamiento anti-TB fortaleciendo la atención integral e integrada centrado en la persona afectada por tuberculosis.

Estrategia de intervención 2.1: Fortalecer competencias en el personal de salud en zonas de fronteras para mejorar la adherencia al tratamiento anti-TB

Actividades:

1. Asegurar los recursos humanos necesarios para lograr las intervenciones con eficiencia.
2. Capacitación al personal de salud sobre el manejo integral de pacientes con tuberculosis: control de infecciones, adherencia y supervisión del tratamiento anti-TB.
3. Uso del formato de referencia internacional de pacientes afectados con TB (revisión de la ficha, procedimientos para cada país)
4. Asistencia técnica y supervisión al personal de salud sobre orientación y consejería para la adherencia y supervisión del tratamiento anti-TB.
5. Fortalecer el tratamiento directamente observado con énfasis en población de zonas fronterizas.
6. Implementar mecanismos de incentivos para el personal que trabaja en zonas fronterizas.

Estrategia de intervención 2.2: Desarrollar acciones de mejora para la adherencia al tratamiento de la TB sensible y TB resistente mediante intervenciones centradas en las personas afectadas de tuberculosis y su familia.

Actividades

1. Brindar orientación, educación clara y completa sobre el tratamiento, seguimiento y control de contactos y las facilidades a la que tiene acceso en toda la ruta que se traslada. ( tarea: material educativo con enfoque intercultural)
2. Brindar orientación y garantizar las medidas de control de infecciones que correspondan en el paciente y familiares.

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**OBJETIVO ESTRATEGICO A.3:** Garantizar el diagnóstico oportuno y acceso a pruebas de susceptibilidad de la población que se encuentra en zonas fronterizas.

Estrategia de intervención 3.1: Desarrollar procedimientos para la adecuada recolección de muestras, embalaje y transporte de las mismas.

Actividades

1. Identificar cuáles son los laboratorios involucrados en el diagnóstico de pacientes en zonas fronterizas
2. Establecer los procedimientos normativos binacionales para el transporte adecuado de muestras de sustancias infecciosas de acuerdo a las recomendaciones internacionales.
3. Capacitación al personal de salud sobre los procedimientos para la adecuada recolección de muestras, embalaje y transporte.

Estrategia de intervención 3.2: Establecer procedimientos para el diagnóstico adecuado y oportuno de pacientes con TB en las zonas fronterizas

Actividades

1. Garantizar la calidad de los resultados del laboratorio mediante el control de calidad externo de los métodos involucrados en el diagnóstico de los pacientes con TB.
2. Garantizar los recursos necesarios en los laboratorios que se encuentran en zonas de fronteras para lograr un diagnóstico oportuno y adecuado
3. Establecer los flujos de muestras en pacientes de zonas fronterizas
4. Asegurar la emisión y recepción de los resultados a las unidades que correspondan de acuerdo a la normativa de cada país.
5. Capacitación al personal de salud del laboratorio sobre los procedimientos para el adecuado diagnóstico de los pacientes con TB

**OBJETIVO ESTRATEGICO A.4:** Asegurar la participación de la sociedad civil en zonas fronterizas para el manejo integral y adecuado de la tuberculosis.

Estrategia de intervención 4.1: Generar mecanismos para la participación oportuna y adecuada de la sociedad civil en zonas fronterizas

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Actividades

1. Identificar y articular con los actores principales de la sociedad civil que realizan acciones en zonas fronterizas: Organizaciones de afectados por tuberculosis, organizaciones no gubernamentales, universidades, iglesias, sociedades científicas, comités de expertos, organizaciones sindicales, ligas de lucha contra la TB.
2. Establecer espacios de diálogos alrededor de la temática
3. Conformación/inclusión de mesas de trabajo para la intervención en el manejo integral de pacientes con TB en zonas fronterizas.

Estrategia de intervención 4.2: Generar mecanismos para la articulación intersectorial en zonas fronterizas

Actividades

1. Identificar y articular con los actores principales en los diferentes sectores en zonas fronterizas (salud, educación, protección, justicia, migraciones, transporte, municipios, ADUANA, pueblos indígenas)
2. Establecer espacios de diálogos alrededor de la temática.
3. Conformación/inclusión de mesas de trabajo para la intervención en el manejo integral de pacientes con TB en zonas fronterizas.

**OBJETIVO ESTRATEGICO A.5:** Promover la transferencia de experiencias mediante investigaciones operativas en los procedimientos involucrados en zonas fronterizas.

Estrategia de intervención 5.1:

Actividades

1. Generar líneas de investigación en las zonas fronterizas
2. Generar presupuesto para la realización de investigaciones que puedan evidenciar las experiencias realizadas en zonas fronterizas.
3. Identificar los investigadores potenciales
4. Capacitación para el desarrollo de investigaciones operativas y su respectiva publicación.
5. Socializar los resultados de las investigaciones a las autoridades locales y nacionales como evidencia científica para la toma de decisiones y compromisos.

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Grupo de Trabajo de Tuberculosis La Paz 7 de junio 2019

**OBJETIVO ESTRATEGICO B.1:** Evaluación Externa de la Calidad de los métodos de diagnósticos utilizados en los laboratorios de tuberculosis

Estrategia de intervención 1.1: Garantizar la calidad de los resultados para el diagnóstico de la tuberculosis.

Actividades

1. Asegurar el envío anual de paneles por parte del Laboratorio Supranacional a los laboratorios nacional de cada país.
2. Garantizar la realización del control de calidad externo a los laboratorios de la red de cada país.

**OBJETIVO ESTRATEGICO B.2:** Asistencia Técnica para los laboratorios de tuberculosis por el laboratorio de referencia

Estrategia de intervención 1.1: Fortalecer la realización de los procedimientos en el laboratorio de tuberculosis siguiendo las recomendaciones internacionales.

Actividades

1. Asegurar la realización de asistencia técnica por parte del Laboratorio Supranacional a los laboratorios nacionales de cada país.
2. Garantizar la realización del asistencia técnica por parte del laboratorio nacional a los laboratorios de la red de cada país.

**OBJETIVO ESTRATEGICO B.3:** Pasantías del personal de los laboratorios nacionales a los laboratorios de referencia.

Estrategia de intervención 1.1: Fortalecer las capacidades técnicas del personal del laboratorio de tuberculosis

Actividades

1. Asegurar la realización de pasantías por parte del personal del laboratorio nacional al laboratorio supranacional.
2. Garantizar la realización de pasantías por parte del personal de los laboratorios de la red de cada país.

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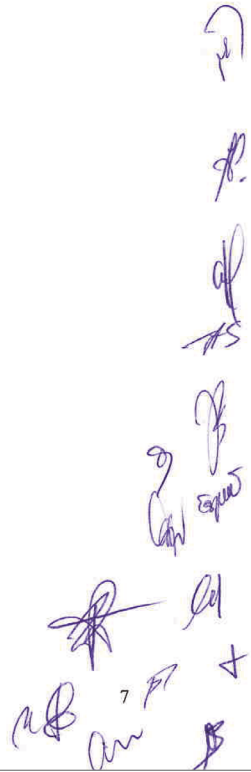
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**OBJETIVO ESTRATEGICO B.4:** Garantizar la certificación anual de las cabinas de seguridad biológica utilizadas en el diagnóstico de la tuberculosis en la región.

Estrategia de intervención 1.1: Realizar los procedimientos que conllevan la certificación de las cabinas de seguridad biológica en los países.

Actividades

1. Actualizar el diagnóstico situacional del número de cabinas de seguridad biológica que cada país tiene para el diagnóstico de la tuberculosis.
2. Realizar un cronograma de evaluación de cabinas a nivel regional.
3. Asegurar el traslado del personal certificado en evaluación de cabinas a nivel regional.



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### **APPENDIX 3: Selection of ratings of some TB reference laboratories, 2019<sup>23</sup>.**

#### **➔ PERU**

##### **• Effect of Technical Assistance Visits received from SNL**

- Update of some operating procedures.
- Exchange of experiences that encouraged continuous improvement.
- Improvements in the development of national algorithms.
- Recommendations regarding comments regarding the issuance of results.

##### **• Effect of NRL internships on SNL**

- Update of procedures and improvement of national algorithms.
- Know the theoretical part and put into practice the methods executed by the SNL.
- Absolution of disagreements in the results. Reference and counter reference system of samples in the laboratory network

##### **• Advances in the process of implementing diagnostic algorithms recommended for the region and developed during the grant**

- The implementation of the recommendations made for the region has been carried out.

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<sup>23</sup> Exhibited on posters during the TB Laboratory Chiefs Meeting, with the group of TB laboratory experts from the Americas region. Activity carried out by PAHO in the framework of the Regional TB Grant of the GF. Guayaquil November 2019. The selection was not made with country criteria, but with the diversity of opinions expressed.

- **Learned lessons**

- Working in an articulated manner with other countries in the region allows laboratory activities to be of greater relevance and scope in the NTP scenario and the fulfillment of the goals of TB elimination
- The role of a benchmark of the laboratory issue in the regional office becomes a necessity
- The recognition of technical capacity in other National Laboratory Network through training and internship activities

➔ **PARAGUAY**

- **Effect of Technical Assistance Visits received from SNL**

We have received recommendations that are already implemented, such as the transfer of higher risk activities to the BSL3, implementation of MGIT Culture for sensitivity tests, time optimization, processing of delivery of results and others in the process of execution such as the transportation of samples of all points of the national network to the Central Laboratory of Public Health (LCSP). In addition, work is being done to obtain an exclusive area of molecular biology for Tuberculosis, with the commitment of the authorities after the last SNL supervision visit. Likewise, it has improved in the management of the BSL2 of the Department of tuberculosis, optimizing the processes. Work has also been strengthened in conjunction with the NTP, which results in the strengthening of leadership in the fight for TB control and the sustainability of the investments made.

- **Effect of NRL internships on SNL**

Each internship has impacted on the performance improvement of the Department of Tuberculosis and the national network. Biosecurity processes have been improved. The MGIT technique for sensitivity tests has been implemented. The process records

system has been optimized, including equipment maintenance, replicating what has been learned in the training carried out.

- **Advances in the process of implementing diagnostic algorithms recommended for the region and developed during the grant**

The acquisition of more GeneXpert equipment has been achieved, from 7 it goes to 16 and through strategic funds of the country 30,000 cartridges will be purchased and in consensus with the NTP to extend the current algorithm to all cases of pulmonary TB, respiratory symptoms previously treated, people living with HIV / AIDS, indigenous and PPL, and thus advance on the road to the universal test taking into account that there is an average of 36,000 respiratory symptoms per year.

- **Process of adoption of regional guides and manuals published during the grant**

We have held meetings for socialization and updating of the topics contained in the new manuals with the LCSP operational staff and with the NTP. They are included in the training plan of the national network of TB laboratories. And replicas have been provided in electronic format.

- **Interventions proposed to be carried out in the national network to maintain the progress made during the execution of the GF grant**

- Include supplies and reagents in the National Tenders (many of them already included) in addition to the maintenance costs of the BSL3 and BSL2 of TB of the LCSP.
- Work was carried out on the acquisition of human resources (HR) for the area of Tuberculosis throughout the network and training in BK was included for contracting them. 64 new technicians were hired and biochemists were trained to observe plates, perform GeneXpert, as well as reorganization of HR linked to the TB Department in the LCSP

- A supervision and training plan was established for the 18 Health Regions, of which 16 are planned for this year 2019 until December, with 2 of them remaining by 2020.
- Funds have been obtained for certification of the BSL2 BSC managed through a project in conjunction with a University of the Netherlands (Radboud). It is intended to manage around 5000 GeneXpert cartridges and MGIT tubes for diagnosis of prison population with another Project with the same institution.

- **Technical support needs of the SNL and PAHO**

- Training in realization of panels for quality control for the national network, anticipating that the SNL will not be able to cover the members of our network in the future.
- Training for application of Genotype` for drugs of 1st and 2nd lines.

A representative company of Hain Life Science (Genotype) is being counted from a few months ago to implement the methodology (there was no representative)

➔ **COSTA RICA**

- **Effect of Technical Assistance Visits received from SNL**

They facilitate the exchange of knowledge on specific topics, as well as specific recommendations in the workplace that allow better processes in aspects of analytical marches, biosecurity, etc.

- **Effect of NRL internships on SNL**

Very beneficial since they allow us to observe how things are done in other environments, as well as the direct exchange with those in charge of tests and processes on the site. They also facilitate the establishment of contacts with more actors than in the case of technical assistance visits.

- **Advances in the process of implementing diagnostic algorithms recommended for the region and developed during the grant**

The new national standard is expected to be published before December of this year and it includes GLI recommendations.

- **Process of adoption of regional guides and manuals published during the grant**

The guides and manuals are used as soon as they are received, adapting guidelines or including them in existing algorithms and manuals as addenda. The national standard that will be published includes the information of the guides and manuals received in recent months.

- **Interventions that are planned to be carried out in the NRL to maintain the progress made during the execution of the GF grant**

The NRL works under a quality management system that has continuous improvement among its components, so that any progress achieved is still reviewed and adapted to new needs, however, everything learned in the process is the basis for Climb to the next step.

- **Technical support needs of the SNL and PAHO**

Technical support will always be necessary, above all, to learn about new recommendations on tests and algorithms. Keeping up to date is critical for an NRL, since it depends on the national laboratories adapting to the new requirements and recommendations.

- **Learned lessons**

Without PAHO's support in promoting knowledge exchange based on regional meetings, updating diagnostic algorithms and training, it had not been possible to achieve country goals.

It is essential that support continues and involves all components of national tuberculosis programs.

- **Gaps still existing**

The contribution of the Global Fund injected new capabilities into regional networks, as well as a dynamism that proved decisive, however, we still have gaps in the areas of infrastructure, quality assurance and training that must be addressed.

In compliance with quality standards, NRL personnel must receive continuous training, at least once a year, on the processes they are in charge of and, in turn, train national networks. Incense does not prioritize the allocation of resources to maintain that frequency of training, so it requires PAHO support to comply with them.

➔ **COLOMBIA**

- **Effect of Technical Assistance Visits received from SNL**

Strengthening of the roll of the NRL regarding the use of diagnostic methods and quality assurance.

Political commitment much more obvious

- **Effect of NRL internships on SNL**

Appropriation of specialized knowledge with a high level of quality on issues prioritized by the country



Integration with the professionals of the NRL with those of other countries, allowing some collaborations, sharing experiences and especially creating friendly ties with a network vision

Positioning of SNL with NRL

- **Advances in the process of implementing diagnostic algorithms recommended for the region and developed during the grant**

Inclusion in the national standard was achieved through a guideline issued by the Ministry of Health, initiating the transition process of smear replacement.

The NRL currently has a trained professional with a high level of motivation for the current guidelines in diagnostic methods.

- **Interventions that are planned to be carried out in the National Laboratory Network to maintain the progress made during the execution of the GF grant**

Socialization with authorities or heads of knowledge acquired in internships and implementation strategy.

Inclusion in the 2020 planning of inputs for test analysis through molecular techniques.

- **Technical support needs of the LSN and PAHO**

Innovation and development of new capabilities

Adoption and analysis of laboratory indicators (GLI)

Information systems and analysis of key data for the laboratory

- **Learned lessons**

- Working in an articulated manner with other countries in the region allows laboratory activities to be of greater relevance and scope in the NTP scenario and the fulfillment of the goals of TB elimination
- The role of a benchmark of the laboratory issue in the regional office becomes a necessity
- The recognition of technical capacity in other NRL through training and internship activities

- **Still existing gaps**

It is important to consider the coordination of laboratory component activities through a reference of the subject in particular when it is necessary to move quickly with the transition of smear

To improve the interaction between NTP and the NRL with a view to the joint appropriation of resources for inputs, reagents, personnel, sample transport, quality assurance.



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