

Plan **TBCero**

A Comprehensive Approach to Tuberculosis Prevention and Control
in the San Cosme Health Center

La Victoria | Lima - Peru

Period 2009 - 2010

September 28, 2012

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We have made every effort to match the intent and integrity of the original Spanish-language report in preparing this English-language version.

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Acronyms and Abbreviations

DATOS	Detection, Analysis, Treatment and Socially Observed
DEMUNA	Municipal Ombudsman for Children and Adolescents (Defensoría Municipal del Niño y el Adolescente)
DISA	Health Directorate (Dirección de Salud)
DOTS	Directly Observed Treatment, Short Course
ESNPCTB	National Health Strategy for TB Prevention and Control
FONCODES	Cooperation for Social Development Fund
GREVA	Resocialization Guild (Gremio Resocialización La Victoria)
MN	Micro-networks
OTB	Observed Tuberculosis Cases
PCP	Peruvian College of Physicians (Colegio Médico del Perú Physicians)
PAT	Patients Affected by TB (Pacientes Afectados por TB)
PRONAA	National Food Assistance Program
TB	Tuberculosis
TBAP	TB-affected Patients
MDR TB	Multi-drug resistant TB
TPA	Tuberculosis Patients Association
UHI	Universal Health Insurance
WHO	World Health Organization
XDR TB	Extensively Drug-resistant TB

EXECUTIVE SUMMARY

San Cosme Health Center, located in the district of La Victoria in Lima, has one of the highest rates of tuberculosis (TB) in Peru. Its population is characterized by a high prevalence of chronic poverty, social exclusion, inequality, overcrowding, malnutrition, unemployment, underemployment, anti-social behavior, and alcohol and drug abuse.

It is in this context that in March 2009 and under Resolution No. 196/2009-DG-DISA.V.L.C, the Lima City V Health Directorate (DISA, Dirección de Salud, D V Lima City) began implementing “Plan TBCero: A comprehensive approach to TB prevention and control in the area of the San Cosme Health Center.” This Plan represents a new strategy for the care of TB patients, one that addresses the patients’ and their families’ conditions in a comprehensive manner, with an interdisciplinary approach that addresses the social determinants of TB.

Its implementation has contributed to a substantial improvement in the operational and epidemiological indicators of San Cosme Health Center’s TB Health Strategy. Toward the end of 2011, at the request of DISA V Lima City, information about the processes that comprised the implementation of this Plan was gathered to reflect on the lessons generated, which are presented in this document.

Throughout the evaluation interviews were conducted with those both internal and external to the TBCero Plan. Documents were reviewed and people participated in discussion workshops identifying innovations. Subsequently, they described chronologically, the most important processes of implementation and made observations on the favorable and limiting conditions of the Plan, as well as the lessons learned.

Initially, Plan TBCero considered partnering with other actors within the jurisdiction of the health center, such as local civil society organizations (mothers’ clubs, health promoters, and groups of former convicts), the local government, or representatives of other sectors like the Ministry of Education and private businesses. Likewise, Plan TBCero considered a truly comprehensive approach, intended to address the health determinants that perpetuated TB in San Cosme. However, Plan TBCero has had to adapt to diverse changes and constraints, so in its first two years only three innovations have been implemented:

The first, a strategic political partnership, was forged between DISA V Lima City and the Municipality of La Victoria, setting objectives and joint actions to provide a coordinated and structured response to TB. This partnership proposed new roles for the health authorities as well as for the local government.

The second was programmatic in nature, with the establishment of a TBCero team made up of family physicians and health promoters. They made home visits in search of patients with respiratory symptoms, evaluated their TB contacts, and followed up with those patients who defaulted on their medical appointments and those who reported difficulties following their treatment.

The third included creation and operation of a Relief House, where drug-sensitive patients with a negative smear were referred. They received integrated care that included TB treatment, psychological and social evaluation of them and their families, and more social, nutritional, emotional and economic support, with care strategies customized for each family.

Plan TBCero's efforts to control TB benefitted from several factors. There were the political commitment and advocacy skills of the DISA V Lima City team itself. There was also the strategic vision created by the DISA V and the Municipality of La Victoria, which they shared with implementation teams, empowering flexible and effective actions toward prevention, promotion, and treatment. In addition, the strategic alliance with professional associations allowed Plan TBCero to include academic support.

The results obtained from Plan TBCero thus far, in purely operational terms, show a clear reduction in TB incidence rates, an increase in the rates of cure and TB suspect identification, and a drastic decrease in the dropout rate of patients from Regimen One of TB treatment.

Plan TBCero has finalized implementation of the first phase. A few remaining challenges have been identified:

The first challenge is to strengthen relations with the National Health Strategy for TB Prevention and Control (ESNPCTB) and with local Ministry of Health agencies in order to institutionalize preventive and promotional activities in health networks and micro networks.

The second challenge is to overcome the clinical approach to TB control while dealing with the social determinants in which the population lives and which contribute to the presence of the disease.

The third challenge is to strengthen and sustain existing human resources —the individuals involved in implementing Plan TBCero— with improvements in job security and recognition. They are, after all, the cornerstone of the Plan.

The fourth challenge is to develop a care strategy that differentiates between drug-sensitive TB and multi-drug resistant TB (MDR-TB). This requires improvement of the ESNPCTB's diagnostic capacities through laboratory strengthening of smear microscopy, access to X-rays, and use of universal rapid susceptibility testing to detect MDR-TB.

The fifth challenge is to strengthen community involvement in the Plan, particularly by promoting the organization of those who are affected by TB so that they can participate fully in the political life of the country and exercise their rights as citizens, which the initial focus of Plan TBCero proposes.

In the first stage of the Plan, we identified lessons learned, such as the new promoter role of the DISA V Lima City team, based on institutional commitment and advocacy with various public and civil society stakeholders regarding health and its social determinants. We also identified and clarified the implications involved in changing the classic notions of health, sickness, and responsibilities allocated to the different entities of the public sector.

Plan TBCero has shown how a change in perception of the health-sickness process causes changes in the provision of public services, the appearance of new actors, and the allocation of new responsibilities for known actors. The evolution of the Plan TBCero and the flexibility in which innovations have been incorporated not only raises the need to continue intervening, but also to identify components of comprehensive care, which are part of the innovations. This involves continuing the introduction of practical tools and systematic registration processes from the perspective of the implementers of the Plan.

Note: the names and titles used in this document belong to the people interviewed during the implementation of this review.



INTRODUCTION

Peru, along with Haiti and Bolivia, has one of the highest rates of TB incidence in the Americas. Lima and Callao account for 56 percent of drug-sensitive TB cases in the country, 80 percent of MDR-TB and 93 percent of cumulative cases of extensively drug-resistant TB (XDR-TB). The district of La Victoria holds one of the highest morbidity rates in Lima, with 1,347 cases for each 100,000 inhabitants for the year 2008. The San Cosme Health Center reports the highest rate of TB prevalence in the district of La Victoria, and its jurisdictional population has high rates of chronic poverty, social and cultural exclusion, inequality, overcrowding, malnutrition, unemployment, underemployment, and alcohol and drug abuse.

Since 1992 the national response to TB has included the implementation of the Directly Observed Treatment, Short Course (DOTS) strategy, which had significant impact on drug-sensitive TB control. Years later it became clear that the response to TB was not as effective when the bacillus had developed resistance to the drugs. Since 1996 MDR-TB cases registered in Peru and initially treated by non-governmental organizations have been on the rise. Only since 2004 has the State offered treatment to people with MDR-TB.

In 2006 the World Health Organization (WHO) defined a new variant of MDR-TB that extends resistance to fluoroquinolones and second-line parenteral drugs, thus defining XDR-TB. The existence of these strains was immediately confirmed in the country. This situation shows that while in the last two decades new diagnostic technologies and treatment regimens have been incorporated and socio-economic support has been provided for the patients, the responses of the health system have not been sufficient to control drug-resistant TB. There are still problems in diagnosis and initiation of prompt and timely treatment, weakness in the contact evaluation system, difficulties in adherence to treatment, low quality care in health services, and limited, poorly motivated human resources that often reproduce society's stigmatization of the sick patient.

It is in this scenario of searching for new effective response strategies to the problem that Plan TBZero was born. Since its conception in March 2009 this Plan has had the technical leadership of DISA V Lima City and San Cosme Health Center authorities, sharing management with the Municipality of La Victoria and the organized participation of community members. Its design and implementation have meant a gradual and collective construction of consensus among those who participate in the diagnosis of the problem, as well as the incorporation of conceptual and methodological approaches of the responses provided by health services. Likewise, strategies and actions for advocacy, clinical administration, and management of psychosocial and nutritional conditions have been incorporated, as well as of comorbidity among the affected; this is complemented with strategies to promote health, communication, and proper health care management.

Plan TBCero is a novel experience in the field of TB response and in the country's history of public health in several ways. First, although the country has a State-organized response to prevent and control TB, this is the first time that a regional body, DISA V Lima City, assumes direct and committed leadership in the fight against this disease at the primary care level. Second, it is also the first time that a political and management commitment has been obtained from a municipal government, in the context of health decentralization. Third, Plan TBCero combines prevention and promotion approaches that seek to overcome the classic public health professional's response, considering the social determinants (social reality of the population suffering from the problem), the scope of the response and the multi-pronged approach to the individual, family, and community linked to a health promoter associate and a family physician. This team reflects the involvement of neighbors and physicians trained to solve sanitary conditions, not just TB, visiting the households of patients.

Two years after its launch, Plan TBCero, as conceived in its initial stage, is still developing. The partnership between the DISA V Lima City and the Municipality of La Victoria (public-public alliance) has been growing stronger and shows significant progress on indicators such as the increase in cure and TB suspect identification rates, and the reduction of the dropout rate of patients to Regimen One of TB treatment. Additionally, some limitations have been acknowledged, as well as new challenges in the implementation of the Plan.

Considering the importance of Plan TBCero described above, the flexible dynamic of its construction and its observed effects, the need arises to reflect and learn about the process implemented: systematize what has been done in a participatory manner, engaging all the actors involved in the process, and balance the benefits obtained with the strengths, limitations, conditions, and future challenges of Plan TBCero. This Plan TBCero documentation had the technical and financial support of USAID through the Quality Healthcare program, and seeks to contribute to the spreading of successful experiences that have improved the efficiency and quality of TB services and which, when replicated in similar scenarios, can achieve better TB control and prevention in the country.



SECTION I. OBJECTIVES OF THE REVIEW

I.1 General Goal:

Systematically document the main contributions of the implementation of Plan TBCero as a public health strategy for TB control in the San Cosme Health Center by DISA V Lima City.

I.2 Specific Goals:

Sequentially identify how the technical and institutional processes associated with the design and implementation of Plan TBCero in San Cosme were developed during 2009-2010, which includes:

- Identify the background and history that gave rise to Plan TBCero.
- Describe the role of the DISA V Lima City and the actors involved in the design of Plan TBCero: January-April 2009.
- Describe the steps followed in the development of the Logical Framework of Plan TBCero: April 2009.
- Describe the steps followed in the negotiation and advocacy with local San Cosme and La Victoria actors.
- Identify the steps followed during the formalization of Plan TBCero (DISA V Lima City).
- Describe the initiatives in the implementation of Plan TBCero: August 2009-December 2010 with the Detection, Analysis, Treatment and Socially Observed (DATOS) strategy, and of San Cosme Family Physicians.
- Describe the contribution and participation of the main actors (DISA V Lima City, San Cosme Health Center, Municipality of La Victoria, affected population, USAID|Peru|Quality Healthcare program, and others).
- Revise the phases of the design and implementation processes of Plan TBCero.
- Describe the effect of the implementation of Plan TBCero on TB control according to performance indicators (operational and epidemiological) between 2009 and 2010.

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SECTION 2. METHODOLOGY

The approach to review this experience was conceived as a process of knowledge construction based on the real-life experiences developed during an inherently collective exercise and which, methodologically, required the participation of as many actors as possible who were involved in the data collection and reflection process.

Unstructured interviews were conducted with key actors from DISA V Lima City, San Cosme Health Center, TB-affected patients (TBAP), the Municipality of Lima, and USAID|Peru|Quality Healthcare program. The interviews were systematically recorded, transcribed and analyzed, organizing the interviewees' contributions according to pre-established analytic components. Both the San Cosme Health Center and the Relief House were visited on three occasions. Based on the contacts and visits to the actors involved in the process, the list of secondary sources of information available was identified, as well as the physical and social scenarios in which the experience was developed.

Later a review was made of existing norms, the operational report of the San Cosme Health Center as provided by the TB Prevention and Control Strategy of DISA V Lima City, and the scientific and news articles published regarding the Plan. The services provided but not registered in the Relief House were entered into a matrix in close coordination with the team of professionals working there. Finally, the descriptive information was summarized.

The information was supplemented with unstructured interviews to other central and peripheral internal actors as well as external actors, as shown in Annex 2. Finally, a workshop was held with the USAID|Peru|Quality Healthcare program team, the DISA V Lima City team, the Municipality of La Victoria team, San Cosme Health Center personnel and TB-Affected Patients Associations to revise and discuss preliminary findings and draft the lessons learned included in this report.



“... lo que es menos que una gota de agua en el océano. Pero si la gota se une al océano, puede hacer algo”.

Madre Teresa de



SECTION 3. RESULTS

3.1. Mapping of Actors

There are two dimensions when it comes to identifying the actors in Plan TBCero. The first is the political-strategy dimension, whose hub was the DISA V Lima City People's Health Directorate team and its coordination with the District Municipality of La Victoria through its mayor and the Social Development Management team. The DISA subsequently sought the Lima College of Physicians' political support through the III Regional Council of Lima's Committee for TB Control, and technical support from representatives of academia and the country's public health system.

The second dimension (programmatic and operational) identified the San Cosme Health Center with the Local Health Strategy for TB prevention and Control team, the Plan TBCero team made up of family physicians, health promoters, and Relief House personnel. This dimension emphasized the accompaniment of the La Victoria Tuberculosis Patients Association (TPA).

Other strategic actors such as the ESNPCTB were identified; the Lima City Health Network to which the San Cosme Health Center belongs; organizations such as CARE Peru, which implemented Rounds 2 and 5 of the Global Fund Program; Prisma; Partners in Health, which carries out research and support programs, and; Pathfinder International, which works as Principal Recipient in the implementation of Round 8 of the Global Fund. The Resocialization Guild (GREVA, Gremio Resocialización La Victoria) organization is also identified, which has a significant presence as it works reincorporating people from the neighborhood into society.

Local neighborhood associations and educational institutions were also present during the initiation of the coordinating committee organized by Plan TBCero, as well as representatives of the private sector, mainly businessmen from the Gamarra Mall of La Victoria. These actors contributed to the Plan's initial proposal due to their interaction with the San Cosme Health Center, yet the Plan's development activities progressively focused on the main actors: DISA V Lima City, San Cosme Health Center, Municipality of La Victoria, TPA, and finally the II Regional Council of the Peruvian College of Physicians (PCP).

3.2. General Characteristics of the Main Actors in Plan TBCero

3.2.1. DISA V Lima City

DISA V Lima City was established through Ministerial Resolution No. 191-1987 by the former Minister of Health Dr. David Tejada de Rivero and under the name Lima City Departmental Health Unit. DISA V Lima City began its formal activities on May 9, 1987. Twenty-two districts make up its jurisdiction, among them Lima Cercado, Breña, La Victoria, Rímac, Puente Piedra, Carabayllo, San Martín de Porres, Independencia, and Comas. It covers a population of 3,785,688 people. DISA V Lima City is served by 128 health posts and centers as well as 10 hospitals, which are grouped into 13 micro networks which make up four health networks.

The DISA, as a decentralized body of the Ministry of Health, governs health activities in its jurisdiction, strengthening policies for prevention and health promotion. Its objectives are protection of life and democratization of health, with active participation of the community and all social and economic sectors within its jurisdiction. In this way, the DISA seeks to build a space for dialogue and coordination with public and private sector representatives in order to maximize participation solving health problems.

When the TBCero program began the management team included Dr. Juan Carlos Velasco Guerrero, Director General; Dr. Luis Loro Chero, Assistant Director General; Dr. Luis A. Fuentes Tafur, Executive Director of People's Health; and Dr. María Ynés Bonzán Rodríguez, Executive Director of Health Promotion. The positions are currently occupied by: Dr. Víctor Cuba Oré, Director General; Dr. Luis Alberto Fuentes Tafur, Deputy Director; Dr. María del Carmen Martínez Bertramini, Executive Director of People's Health; and Dr. César Torres Nonajulca, Executive Director of Health Promotion. The main role of this team was political, coordinating and acting as an intermediary in the implementation of the Plan. They also played a financial role. The ESN PyC TB's initial investment was approximately S/ 700,000 PEN, of which close to 40 percent was financed by the Municipality of La Victoria.

3.2.2. San Cosme Health Center

The San Cosme Health Center belongs to the DISA V Lima City Health Network and has a jurisdiction that includes populous urbanizations, slums and San Cosme Hill, adding 22,317 inhabitants. The living conditions are inadequate, with a high percentage of the population living in poverty without access to basic services. The health center has one of the country's highest TB incidence rates, which coincides with the disturbing reality of high-risk exposure and severe conditions of vulnerability over time.

The Local Health Strategy for TB Prevention and Control in the health center leads the strategic and technical aspects of local TB control, seeking to provide high-quality comprehensive care to the patients and their families in order to reduce morbidity and mortality in the community. Annex 1 introduces the members and roles of the teams. They functioned as implementers and coordinators of the strategies proposed in Plan TBCero.

3.2.3. District Municipality of La Victoria

This institution is responsible for local management, providing municipal services that seek to promote comprehensive development, environmental conservation, district street sweeping, cleaning, care for green areas, and the welfare and safety of the neighborhoods in the district of La Victoria. Its mayor Arch. Alberto Sánchez Aizcorbe Carranza works together with the management team, led by Andrea Edith Matías Muñoz. Strengthening comprehensive health and nutrition services, particularly for the most vulnerable, lies within the Municipality's institutional objectives. With this in mind, the team involved in its implementation focused on participating in the execution of Plan TBZero, at the invitation of DISA V Lima City representatives. It had a political and financial role, as well as that of spokesperson for citizen participation — with the aim of reducing the TB incidence rate in this district 30 percent over a period of five years through a joint effort of people affected by TB, their families, private enterprises in the district, and the San Cosme Health Center health staff.

3.2.4. III Regional Council of the Peruvian College of Physicians

The PCP is an autonomous institution of public law made up of democratically constituted groups that are representative of the medical profession throughout the country. Its creation dates back to October 16, 1964, by Law No. 15173, amended by D.L. 17239 on November 29 of the same year. It appointed its first National Council in November 1969, chaired by Dr. Jorge de la Flor Valle.

Because it is mandatory to be registered in the PCP in order to practice medicine, the College of Physicians has the duty of enrolling all who are legally eligible, authorizing them to practice medicine. The PCP's mission is to promote social welfare and proper medical performance, support health rights reform and universal access to social security, and guarantee a scientific, humanitarian, and professional preparation and practice based on ethical-deontological principles.

The work of the PCP is to promote and monitor professional practice according to the Code of Ethics and Deontology, as well as organizational strengthening, promotion of quality of professional preparation, and the ongoing struggle for the right to health and social security to become a reality for all men and women in the country. The national dean of the PCP is Dr. Ciro Maguiña Vargas, and the dean of the III Regional Council in Lima is Dr. Alberto Gayoso Villaflor. The Council acted as adviser and promoter in the implementation of Plan TBZero's strategies through the participation of TBZero team members in the TB Sub-Committee which, in turn, belongs to the Public Health Committee of the III Regional Council. The Council also participated in the publication of the "General guidelines for a TB control and prevention program in Metropolitan Lima" and provided political support by circulating statements expressing its favorable opinion regarding the execution of this Plan.

3.2.5. Tuberculosis Patients Association in La Victoria

The TPA in La Victoria is a civil association that began its activities in March 24, 2007, to protect the rights and dignity of people with TB. Members of the TPA are patients from health centers of La Victoria, El Pino, El Porvenir, Max Arias, and San Cosme.

With approximately 30 active members and a board of 5 members, the TPA has a charter, bylaws, and member registry. The TPA has been administering the respective documentation at the Municipality of La Victoria so as to formalize it in the public records. The Association has acted as advocate and intermediary between the general population, TB patients, and the authorities of the San Cosme Health Center, as well

as the Municipality's Relief House. Furthermore, the TPA was involved in several house calls to affected patients to assist with social and economic aid for the families.

The mapping of actors (Table 1) shows the level of interest and influence of the major players in Plan TBCero. In general, there is greater support at the local level.

Table N° I
MAPPING OF ACTORS ACCORDING TO ATTITUDES, INTERESTS, AND INFLUENCE

Actors	Start of Plan TBCero		Current Situation		Level of Influence
	Attitude toward Plan	Degree of Interest	Attitude toward Plan	Degree of Interest	
National Government Actors					
National Health Strategy for TB Prevention and Control	Opposition	Low	Undecided	High	High
National Penitentiary Institute: Health Directorate	Support	High	Undecided	Moderate	Low
Local Government Actors					
Municipality of La Victoria	Support	High	Support	High	High
CONMUL	Opposition	High	Opposition	Moderate	Moderate
Relief House Team	Support	High	Support	High	High
Local Health Sector Actors					
DISA V Lima City	Support	High	Support	High	High
Lima Health Network	Undecided	Moderate	Undecided	Moderate	Moderate
San Cosme Health Micro-network	Undecided	Moderate	Undecided	Moderate	Moderate
San Cosme Health Center	Support	High	Support	High	High
Local Strategy for TB Prevention and Control	Undecided	High	Support	High	High
Plan TBCero Team	Support	High	Support	High	High
Civil Society					
Peruvian College of Physicians	Undecided	Moderate	Support	High	High
CARE	Support	Moderate	Support	Moderate	Low
Dr. Eduardo Gotuzzo (academic)	Support	Moderate	Support	Moderate	Low
Dr. Eduardo Ticona (academic)	Support	High	Support	High	Low
Dr. Oswaldo Jave (academic)	Undecided	Low	Undecided	Low	Low
Tuberculosis Patients Associations					
TPA La Victoria	Support	High	Support	High	High

Notes: Low support: Showed interest in the intention of the Plan, yet did not commit to promoting it.

Moderate support: Showed interest in the intention of the Plan, participated in some coordination meetings but did not commit to lead the implementation process.

High support: Showed interest in the intention of the Plan, committed to promoting it, and showed additional commitment to beginning and continuing the Plan, in keeping with the nature of their institutions' work.

The Plan's internal stakeholders have been increasing their commitment and have become a strong core. Moreover this experience has led to the strengthening of local actions in the context of decentralization, where self-determination has been reinforced.

The presence and support of key actors from the academic sector of professional schools as well as various practitioners has shown thoughtful contribution, interest and backing throughout the implementation of the Plan.



SECTION 4. PLAN TBCERO PROCESSES

4.1. Background

According to C. W. Mills¹, in order to understand history and biography it is necessary to comprehend each from the other's perspective. Thus, to understand the processes that were carried out during Plan TBCero it was important to capture the experiences of each organization, including the personal contributions of those who lead the Plan.

The sensitivity expressed by Dr. Fuentes Tafur for the problem of TB and for the urgent need for an improved response to the disease originated with the information he received regarding MDR-TB² while he was Director General of the National Public Health Center of the National Health Institute in September 2008. Therein arose a personal motivation based on scientific evidence presented in the final report of the ESN PyC TB's XDR-TB Committee: "Analysis of the current situation and proposal of technical guidelines for the control and prevention of drug-resistant TB in Peru, 2008."

"up until then I had thought TB was not such a serious problem anymore... At that moment my heart broke and I said 'Wow, and here I am, blind to it all.'"

— Interview with Dr. Luis Alberto Fuentes Tafur, Deputy Director of DISA V Lima City

In February 2009 Dr. Fuentes Tafur took on executive management of the People's Health of the Lima City Health Directorate, under whose jurisdiction the San Cosme Health Center is located. In January 2009 Dr. Pamela Canelo arrived at the San Cosme Health Center to provide clinical TB care. The conditions of TB care services in the San Cosme Health Center saw no hopes of improvement, with high patient demand, scarce human resources, and tangible needs.

¹. Mills, C. Wright. La imaginación sociológica. México, Fondo de Cultura Económica, p. 157.

². Del Castillo H, Mendoza A, Saravia J y Somocurcio J. Análisis de la situación actual y propuesta de lineamientos técnicos para el control y prevención de la tuberculosis resistente en el Perú, 2008.

“they came as if it were a mall, a bunch of people outside waiting to be seen... I wanted to see them quickly, a bunch of people were MDR and the mood turned sensitive because they had to take their meds and at the end of the day it was exhausting; after having talked to so many people, going outside and finding the pills lying on the floor was what angered and saddened me the most.”

— Interview with Dr. Pamela Canelo, Responsible for the Strategy for TB Prevention and Control at San Cosme Health Center

The head of San Cosme Health Center, Dr. Eduardo Rumaldo, sums up the situation of the TB response in San Cosme before Plan TBCero as a limited DOTS Strategy with excessive patient demand, extremely limited human resources, poor infection control, infrastructure and quality of care constraints, among others. This scenario, while part of the country’s overall situation as mentioned by the Dean of the College of Nurses, seemed to rise to its most critical levels in San Cosme. The president of the TPA agrees to a large extent.

“...and since I gave lectures here, I began to realize there weren’t enough personnel and not much monitoring for patient treatment. It was a concern; during the talks the patients indicated that they did not receive proper care”

— Interview with Mr. Jesús Alva, La Victoria TPA representative

Meanwhile, the mayor of the Municipality of La Victoria, Arch. Alberto Sánchez Aizcorbe, with a governing term ahead, faced a district with many urgencies and limited resources. Mortified by the stigmatized vision of San Cosme as “the hill that coughs,” he was summoned by the DISA to respond to the problem in a collaborative way. He saw in Plan TBCero a strategic way to approach a highly needy population whose problem was difficult to tackle by the local authorities. Yet he also saw a troubled organization with a political culture based on mistrust, where State institutions are discredited due to the minimal response they have given to their needs over time.

“working in San Cosme has been the main objective, more so when San Cosme is stigmatized for having a high TB incidence. Therefore the local government had to do something about it.”

— Interview with Ms. Edith Masías, Municipality of La Victoria Social Development Manager

4.2. Early Stages of Plan TBCero

On March 6, 2009, Directorial Resolution N. 196/2009-DG-DISA-V-LC was published, establishing the Plan TBCero Management Committee and appointing Dr. Velazco as president and Dr. Fuentes Tafur as executive secretary. This resolution established the Comprehensive Plan for TB Control in the District of La Victoria, Cerro San Cosme; it is from this document that the Plan gets its name and official recognition. Furthermore, this first Plan for TB control was approved for the purpose of contributing to a decrease in TB incidence and based on a citizenship approach within the jurisdiction of the San Cosme Health Center, La Victoria.

The comprehensive document proposed four approaches that had not been developed thus far: social determinants, health as a human and citizenship right, decentralization,

and governance. Six strategies are incorporated with their corresponding lines of action: 1) advocacy, 2) clinical management of TB-affected patients, 3) handling of psychosocial and nutritional factors, 4) management of TB-HIV co-infection and other co-morbidities, 5) health and security for healthcare providers, and 6) Plan TBZero health promotion and management.

Finally, it was established that the Municipality of La Victoria would provide political leadership and DISA V Lima City would provide technical direction. It is important to mention that Plan TBZero did not suggest achievement targets or indicators. In March of the same year the Lima City Network of DISA V Lima City conducted “Módulo Perú” in San Cosme, which aimed to implement tangible goals to benefit the neediest. This way they would gain access to the social programs provided by the Government, among them the program that offers comprehensive health care. It is in this context of political dialogue, which involves State actors such as the Prime Minister, the Minister of Health and the Minister for Women, the mayor of La Victoria and regional and local authorities, that the problems of TB diagnosis and the health situation in San Cosme become evident.

4.3. Plan TBZero Logical Framework

The USAID | Peru | Quality Healthcare team was approached in April 2009 in a search for opportunities and partnerships to undertake the development of the Plan. After presenting Plan TBZero and the scope of work of the program, the need to elaborate a logical framework for the project that would articulate its components was identified, as well as the contribution to an improved quality in TB care through the implementation of a performance improvement methodology (PIM). The project proposes technical assistance in order to carry out these two activities prior to the start of Plan TBZero.

The incorporation of the PIM into TB care at the San Cosme Health Center consisted of an analysis and revision of compliance with best practices (standards) in the care of suspected TB cases or TB patients in treatment. This involved a process of training, guideline validation, registration, and follow-up. Guideline validation was performed and a preliminary report was drafted, which served as a basis for a second stage of activities.

In pragmatic methodological terms, the development of Plan TBZero was achieved with technical assistance for the creation of a logical framework. For its elaboration the program retrieved relevant information from the San Cosme Health Center, and program staff conducted field work to assess in situ alternatives to the proposal. This led to the goals, objectives, and activities of Plan TBZero organized in a logical framework matrix, with a budget attached as an annex.

4.4. TBZero Round Table

The consultation and referendum process driven by Módulo Perú led to what would later be known as the Multisectoral Bureau in the Fight against TB, or TBZero Round Table. The Round Table conducted nine meetings that began on June 18, 2009, and continued through October of the same year. The creation of a Round Table focused on the fight against TB arose partly from DISA policy, constant advocacy with other actors, and a conceptual approach to TB that focused on social determinants. Talking about TB meant talking about development. These three elements made the TBZero Round Table an experience of broad participation, as was proposed in Plan TBZero, and which meant a major effort to strengthen the DISA – Municipality relationship.

The TBCero Round Table empowered various social actors in the area. The GREVA organization (association of people reincorporated into society) participated in this effort, with significant presence in the daily actions of local institutions (grassroots social organizations), educational institutions, neighborhood associations, health promoters, and the private sector represented primarily by grassroots organizations of the Gamarra Mall. The Ministry of Health was represented by DISA V Lima City, and the local government by a representative of the Municipality of Lima. The Round Table also included the participation of San Cosme Health Center authorities, health promoters and representatives of the Municipality of La Victoria, who were absent in late August 2009 due to ongoing complaints received by grassroots organizations that used the opportunity to proclaim their dissatisfactions with the local government.

This dynamic of dialogue and social participation regarding the TB situation relative to urban life, overcrowding, poverty, unemployment and malnutrition, among others, soon led to social, economic and political demands that exceeded the scope of the Round Table. At that moment the possibility was assessed of building a joint improvement project based on this process of multisectoral consultation. It was then that the Association of TB-affected Patients joined the process.

The TBCero Round Table was able to position TB in the public policy agenda, in the national health agenda, and in local agendas, thus becoming the foundation that led to the implementation of Plan TBCero.

Alongside DISA V Lima City an internal effort was brewing in which the team outlined the project that would later become Plan TBCero. The need to create the notion of family physicians was identified, and this constituted the first part of the Plan.

4.5. Plan TBCero Approaches and DATOS Strategy

Toward the end of 2009, Dr. Luis Fuentes published an article in the INS Journal: Peruvian Journal of Experimental Medicine and Public Health, 2009; 26(3): 370-379 called: "Sociopolitical Approach to TB Control in Peru" where seven principles were outlined that would create innovations in Plan TBCero. These principles were based on several theoretical elements and an analysis of the situation:

- 1. Moving from a damage approach to a life approach.** Poor living conditions are the main enemies of health and are allies of the disease. This context gives rise to the understanding that it is not about fighting a living being, but rather that humans should prepare individually and collectively to transform their physical, social and political environment so as to improve their quality of life and impede conditions of development and transmission of the bacillus. This challenge makes it crucial to complement the ideas of the Western medical system with the paradigms of other holistic medical systems.

From a perspective focusing on life, the author commits to fighting TB with social justice, redistributing not only economic means but also recognition, solidarity and social inclusion to the affected: recognizing them as human beings who are temporarily affected by TB. This approach, based on the exercise of citizenship, requires treating each and every member of society with dignity, including those affected by TB.

- 2. Moving from an individual approach to a family and community approach.** This acknowledges that TB is not only individual but can have an effect on an entire family

or community. Family stigmatization is frequent and affects the integrity, mental health and life projects of its members.

- 3. Moving from an approach of social exclusion to an inclusive approach based on social networks.** People affected with TB should maintain proper communication with the political system, establishing cooperative social networks. This design contributes to the construction of social capital, for networks are a source of cooperation, solidarity, reciprocity and civil engagement. TPA become empowered within the network and exercises their right to make decisions about their own lives through public policy.
- 4. Moving from a welfare approach to an approach based on health rights of the patients as well as of healthcare providers.** For this, the State must guarantee the best sanitary conditions for the population, from the health sector to all other government sectors, regional and local.
- 5. Moving from a biomedical approach to a political and social approach.** In a just society freedom consists not only of the right to vote, but also implies having the possibility to access better life conditions, control over one's own life, and to have a voice and be heard.
- 6. Moving from a structured approach to one of systematic governance and decentralization in health.** The Ministry of Health must exercise its governance respecting the diversity of actors, for the efforts currently displayed by the sector show overlapping actions that result in an irrational use of scarce resources.
- 7. Moving from an asymmetric information approach to one of transparency and accountability.** The management of any program, project or plan should necessarily be based on public ethics, promoting social participation and strengthening confidence.

In addition to the philosophical approaches that summarize what has been done and learned, Plan TBZero proposes the DATOS Strategy that is implemented in San Cosme as a practical application of technology. It seeks to strengthen the DOTS Strategy proposed by the WHO, supplementing its five components. DATOS stands for Detection (not only of the bacillus but also of the living conditions that make TB patients vulnerable), Analysis (not only of the conditions of bacillus transmission but also of why the disease occurs, generating a strategic assessment), Treatment (not only as medical handling but also as a commitment to social adherence), and Socially Observed (because it seeks to overcome surveillance, replacing it with accompaniment). DATOS is thus established as a public health strategy for TB.

This complementary DOTS strengthening approach had three operational tactics: 1) attention differentiated by levels; 2) the innovation of ambulatory physicians — San Cosme family physicians, and; 3) observation of TB cases (TBO). The first responds directly to the actions of the Relief House and individual, family, and community care. The second responds to extramural actions taken by family physicians and promoters during house calls, and the third, TBO, corresponds to the detection of patients with respiratory symptoms in community settings.³

³. In Spanish, TBO sounds like "te veo," which means "I see you."

4.6. Composition of the TBCero Team

According to the DISA V Lima City Assistant Director, the work proposal took into account the Cuban family physician strategy, which led to the determination to apply a similar strategy in San Cosme. This would include dedicated and committed physicians who would scour the area and respond to the needs for comprehensive care as well as TB prevention and control.

The DISA V Lima City team soon found that family physicians needed the company of a promoter in the area, someone who lived in the zone, was known by the inhabitants and would ensure the recognition of the health team. There was also fear for the team's personal security, for it is considered a high-crime zone with little or no presence of State institutions in charge of public safety. This access feature to the zone complemented the health promotion capacities of many women who have a background of working in community health.

“in order to have doctors walking in the area, we had to choose promoters who would accompany the family physicians. In the end the team consisted of a traditional doctor together with a western occidental physician. For us they (the promoters) are physicians, because that's what they have been all along.”

— Interview with Dr. Fuentes Tafur, Deputy Director of DISA V Lima City

The family physicians' professional background required by the DISA team called for experience working in communities with scarce resources and high vulnerability. Three young doctors were thus called upon who returned from their rural service and who had graduated in the same class. These family physicians reported that they were surprised to be asked about their community service vocation rather than clinical management of the disease.

In October 2009 these doctors went through 15 days of training, receiving information and self-reflection sessions from well-known specialists with extensive experience. Along with the three family physicians were three women who had ample field experience in health promotion. The head of the San Cosme Health Center emphasized an attitude of commitment and of identification with Plan TBCero.

4.7. First Moment of the TBCero Team: Exploration

After the training period, the TBCero team entered San Cosme. Initially the activities and organizational forms were not well-defined for any of the actors, which led the doctors and promoters to feel that there was no clear direction.

For the family physician and promoter teams, this was a new experience. They were part of a little-known, operationally flexible Plan and knew that history was being written at each moment. This experience was accompanied by feelings of uncertainty as they perceived a poorly planned execution.

The initial instructions were simple: walk to the hill, cross it from side to side, meet the people, talk to them, get to know the neighborhood authorities so that they would later be

able to act with confidence in their activities and be recognized so as not to become victims of the abundant crime in the area. It also became clear to everyone that access to the population was mediated by the promoters, who were themselves a symbol of protection, providing real access to locations where the State had limited presence.

The schedule of activities and levels of coordination was also initially unstructured. The team depended directly on DISA V Lima City, from which they received indications and to which they reported. This situation became uncomfortable among San Cosme Health Center authorities and raised concerns among other service delivery staff, for the new role of extramural work was not being recognized. At the same time there was a perceived overestimation of the work, given that some providers considered it useless to have three doctors walking along the hill performing no clinical activity at all.

An item that caused major difficulties in the working of the Plan TBZero team was the perception of an inconsistent pay scale. A family physician's gross income was about 50 percent greater than the current income of the person responsible for the strategy, a situation that clouded the work environment. Even worse was the case of the promoters, who had a new labor regime given that they had not previously been paid for community service and were now earning 40 percent more than a nursing assistant. This motivated subsequent complaints from the permanent staff members who worked in TB service. The health center director took advantage of these circumstances to increase some people's salaries, though still not leveling them with those of Plan TBZero, paid by DISA V Lima City.

In this context Plan TBZero turned out to be beneficial as it retained human resources with extensive experience in program management whose departure would have been costly for the service; however, job instability within the Plan TBZero health staff and the leveling of wages with permanent staff has not yet been overcome, thus posing an ongoing challenge.

The scenario within the health center became more complex with the unwillingness of some internal actors (not the health personnel working in the TB Prevention and Control Strategy) to accept the changes. This was caused by the considerable growth of the TB team, accompanied by an often stigmatizing valuation of the TB Strategy. This aroused mixed feelings that led to questionings and criticisms of the Plan, as well as discomfort toward the TBZero team and the Health Strategy.

4.8. Second Moment: Introducing the Plan TBZero Team

Notwithstanding the work environment, activities began and after the first stage of recognition, paired brigades were formed to initiate the visits. Three zones were defined, and one family physician accompanied by a promoter took care of each zone.

Five functions were clarified and outlined: 1) detection of persons with respiratory symptoms; 2) evaluation of the patient; 3) contact evaluation; 4) visits to the patients and their families so as to avoid dropouts; and 5) monitoring of patients who missed appointments or failed to take their medications. The brigades provided these services as part of comprehensive care, including detecting risks and diagnosing other health problems.

A procedure was established whereby the extramural team's work began with the confirmation of each home address in order to authorize its entry into the program within 24 hours. If the home address was confirmed then the patient was admitted to the program. The doctor working on the TB Strategy at the health center coordinated with the TBCero team for the evaluation of pulmonary TB patients' contacts. The TBCero team had one week for this activity. The evaluation included contacts within each home as well as outside the home, in work or study settings.

Regarding general or comprehensive care, it immediately became necessary to intervene in the homes. However, these home visits were not systematically recorded. Some examples included diabetes care, hypertension, growth monitoring, acute respiratory infections and diarrhea in children, among others. The work made it necessary and functional to increase coordination with the TB Strategy of the San Cosme Health Center, despite the important autonomy given to the TBCero team, sustained in its relationship with DISA V Lima City. This stage lasted approximately 10 months, until mid-2010.

4.9. Third Moment: Team Building and Relief House

A few months later, the TBCero team achieved its incorporation into the TB Strategy team of the San Cosme Health Center. Roles were clarified and extramural work was organized. The ranking and achievement of goals can be assessed in the context of the TBCero team as it joined the health center team and after a period of relative autonomy.

“only after about 10 months was the work better coordinated, and it improved more and more as it gained support.”

— Interview with Family Physicians and Plan TBCero Promoters

The loss of autonomy and the incorporation into the health center team was highly valued. However, some risks were perceived such as losing flexible hours or, in responding to health center needs, neglecting the original goals of the Plan. The proposal's complementarity between intra- and extramural functions and activities is still not clearly perceived.

From this integration, the TB strategy of the San Cosme Health Center began to see the benefits of an extramural team more clearly. This perception has meant a fundamental change in the consolidation of the integration. Paraphrasing a health center interviewee, “I started to feel that its eyes and arms grew and it could go further...” The inclusion of the TBCero team enabled differentiated care for people who had difficulties getting to the health establishment, such as the elderly, the disabled, and people with drug and alcohol problems, among others.

Even in the consolidation of the team the trial-and-error type of planning has continued. Work structure and organization remains in constant change, and this is proposed as an ongoing learning process.

“we are constantly modifying our work methods as we find new errors. That's the advantage of Plan TBCero: it's not something rigid and inflexible, but rather something that evolves over time.”

— Interview with Family Physicians and Plan TBCero Promoters

4.9.1. Relief House

In January 2010, during the meetings at DISA V Lima City regarding Plan TB Cero, the idea of including a Relief House was mentioned. Thus, on March 24, 2010, the San Cosme Relief House was launched. This was thanks to the effort of the Municipality of La Victoria in supporting treatment, accompaniment of and comprehensive support for people with drug-sensitive TB who had passed the stage of infection. Patients were transferred from the San Cosme Health Center to the Relief House after a committee of the San Cosme Health Center TB Strategy evaluated the case.

Patients who met the criteria attended the Relief House twice a week to receive their treatment, supervised by the Relief House staff. Admission began on the third month of treatment, after patients became smear-negative and moved on to the second phase of their treatment. These patients were the responsibility of the Relief House for the next four months, during which time the treatment was finalized. The Relief House team consisted of a psychologist, team leader, nurse and two nurse technicians. There the patients received their medications, breakfast, and vitamin supplements as necessary.

In addition, an initial psychological and social evaluation was performed to identify collateral problems that could limit adherence to the treatment. From this the team began its comprehensive care strategy, focusing on basic needs, using existing resources and coordinating with social programs promoted by the Municipality of La Victoria and other organizations.

“since the Relief House’s official launch on March 24, 2010, we have gained an ally; we are now united, with the local government and the health sector jointly represented through the health center.”

— Interview with Dr. Rumaldo, Head of the San Cosme Health Center

The goal of the Relief House was to provide a place of warmth and psychological and socio- economic support for the patients and their families in order to guarantee adherence to the treatment and help improve their quality of life. Care was decentralized from the concentration at the San Cosme Health Center, providing better control of infection and transmission of drug-resistant bacilli from smear-positive patients to others who attended the health center.

While the direction was clear about the warm atmosphere needed in patient care, the specific actions were defined over time, especially those related to day-to-day social and economic aspects. Thus arose the need to facilitate user registration in the Universal Health Insurance (UHI) registry, as well as the need to encourage identity records for many patients and family members who had no birth certificate or official ID, fundamental requirements for entry into social programs.

The Relief House team quickly managed to organize and synchronize skills and similar interests. Its execution was financed by the Municipality of La Victoria in terms of infrastructure and equipment. The health center’s central office was in charge of technical supervision.

Decentralization of directly observed TB therapy was definitely one of the main difficulties in establishing the Relief House. The resistance displayed by the National TB Health Strategy, which had already shown skepticism regarding the characteristics of the Plan, was troubling. Their authorization was nonetheless obtained and Plan TBCero was implemented. Criticism centered on Plan TBCero's vertical nature whenever directions came straight from the DISA V Lima City, bypassing the corresponding Health Network and Micro-network bodies. Health improvement actions were also centralized and did not address the social factors that were originally proposed.

The population, especially those affected by TB, greeted the Relief House with great expectation, while the TB Strategy in the health center continued to be received with hostility due to its incorporation into the Plan TBCero. Although it took some time for local perception to see the Relief House as an extension of the health center, distrust and resistance were initially encountered when it came to transferring the patients. A Relief House evaluation committee was later organized to determine the moment in which health center patients had to be referred to the CA, and to this day it continues to work efficiently.

The Relief House team earned the trust of the San Cosme Health Center TB Strategy team based on its work and results. The vision was clear and shared by the team, but the tangible actions were designed over time, taking into account the patients and, most importantly, ways to improve their quality of life.

The comprehensive care perspective in terms of the spiritual, psychological, social and cultural aspects was part of the discourse around Relief House care. This was handled by the team with flexibility and creativity. Each case was treated individually, challenging the procedures used in the previous case.

When the idea first arose of having a reference site for those affected by TB, it was proposed that just as family physicians should provide the medical diagnosis of families who visited San Cosme, so should the Relief House carry out social and medical diagnoses as well as coordinate with the family physician to enable the respective house calls in case a health problem was detected. It soon incorporated the need to consider not only the individual but the family as well, consistent with the integrated approach of the Plan.

Faced with the patients' social and economic needs, allies were sought and patients were incorporated into social programs and benefits as needed and provided. Social programs provided by the Municipality of La Victoria were the main points where support could be requested.

4.9.2. Role and Working Scope from the Municipality

From the perspective of the Municipality and according to its Social Development Manager, the intervention in San Cosme was based on: 1) wardrobe, cosmetics, and self-image advice; 2) allocation of family physicians and strengthening of Plan TBCero;

and 3) follow-up of the promoters. The wardrobe, cosmetics, and self-image advice are not directly related to TB but favor the residents' quality of life nonetheless, improving their mental health, self-esteem, and self-care. When it comes to health promoters, support has been to strengthen their TB knowledge and gain commitment from those affected who are seen at the Relief House.

In the industrial and commercial area of Gamarra (part of San Cosme Health Center's jurisdiction), the Municipality has been providing workers with health cards, which includes chest x-rays. Fifty percent of the workers have been covered, and a campaign for healthy restaurants was also launched. Among the main limitations found was workers refusing to take a TB test for fear of discrimination if identified as sick, and the possibility that their employers obtain the results.

4.10. Fourth Moment: Expansion

Advocacy for the Plan's legitimacy and expansion to other communities has been part of the DISA V Lima City activities since the beginning. It is important to note in the workbooks the numerous meetings with stakeholders from all backgrounds: factory owners, central and regional government authorities, representatives of international associations, and civil society and international organizations. The bond with professional bodies has been permanent, even in the pre-election context of 2010 when Plan TBCero was incorporated into the PCP's main agenda as a response strategy to address TB in Lima.

4.11 National and Regional Governments

An analysis was made of the situation, including the response to TB given by the State and by health institutions. This analysis assessed the limited political commitment shown by the highest State authorities, as well as poor stewardship and organization of the health strategy. An alarming situation regarding the expansion of MDR-TB and XDR-TB, the most serious forms of TB, was thus identified.

“there is a slow response given by the State. You see how the Social Security system continues to work only from Lima. The Ministry, which is the governing body, doesn't convene; the program can even do positive things, but its steering role in TB has not been assumed as I would have thought. Just like the Ministry got involved in universal insurance, I would have done TB, TB, TB every day. For me, TB is one of the greatest priorities not only for the health sector, but for the country.”

— Interview with Dr. Ciro Maguiña, Dean of the PCP

The PCP created a TB Sub-Committee within the Regional Council of Lima's Public Health Committee. Resolution No. 0183-CR/III-CMP-2011 was declared and new members were appointed to the Regional Council's advisory committee from members of Plan TBCero San Cosme. Strategies were generated and the committee focused its recommendations on the expansion of Plan TBCero to other areas of Lima. During the first months of 2011 the PCP published the general outline of a program for TB

prevention and control in Lima based on the model that was being implemented with Plan TBCero in San Cosme; whereby the TB situation in Lima is diagnosed, and an outline of the Plan is proposed as a strategic response to the problem.

“Plan TBCero has gone beyond the medical scope; for us, this will generate citizenship since it’s a platform that serves for many things. We are already considering a Cancer Zero Plan together with the National Institute of Neoplastic Diseases, based on this platform and with a similar model.”

— Interview with Dr. Luis Alberto Fuentes Tafur, Deputy Director of DISA V Lima City



SECTION 5. PLAN TBCERO OUTCOMES

Questioning Plan TBCero about its effects leads us to point out the characteristics of the Plan, which began with the initiative of DISA V Lima City authorities and professionals committed to a response to TB. The need for change was clear and shared. However, programmatic and operational strategies initially implemented were shaped and redesigned as Plan TBCero progressed and new challenges were taken on.

An important innovation, the most important one according to the academicians interviewed, has been the growth of advocacy among local municipal authorities in the District of La Victoria. Arch. Alberto Sánchez Aizcorbe joined the team of promoters, creating the DISA-Municipality partnership of two public institutions. This fundamental alliance became the main impact of Plan TBCero to the extent that it generated political and financial commitment for program activities.

“it’s the participation not only of the health sector but also of the community and the municipality. I find this very beneficial because they have also involved religious groups, the city hall, and the community living around the hill.”

— Interview with Dr. Eduardo Gotuzzo, Tropical Medicine
Academic Researcher at Universidad Peruana Cayetano Heredia

It is important to point out that coordination with the municipal government involved not only an appeal that is similar to others, but has also meant a change in the very notion of health, conceiving it beyond purely biomedical approaches. In this context, health is produced by a combination of biological and social conditions, largely emphasizing the social determinants of the disease. This limits the possibility of responding to the disease from the health perspective alone, and makes it imperative to consider multidimensional responses that commit social development sectors as a whole.

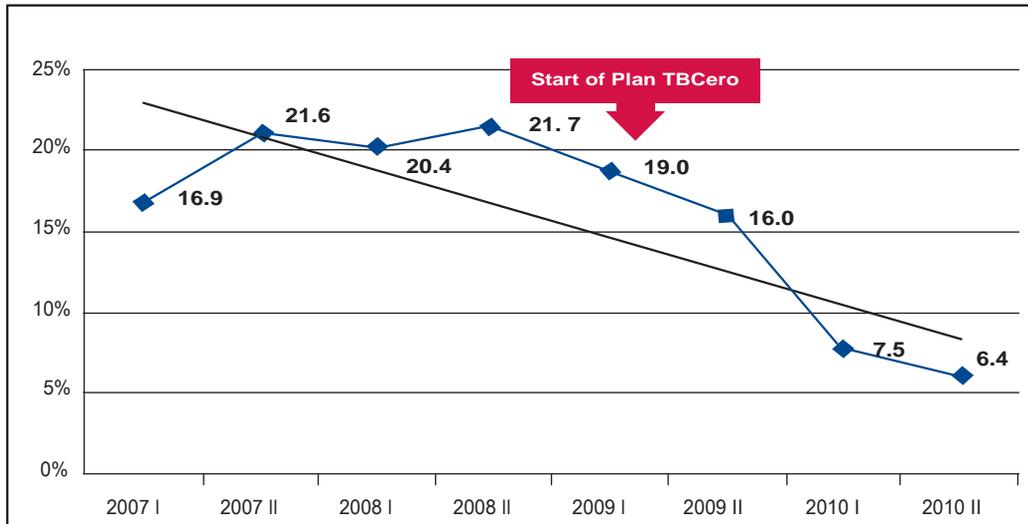
Plan TBCero is considered successful according to the TB Health Strategy indicators. The incidence rate has been significantly reduced, which means there are fewer new TB cases. The dropout rate has also been significantly reduced. In 2008 the San Cosme Health Center reported a dropout rate of 21 percent, with some interviewees noting that “the patients lived in a difficult environment,” referring to the alcoholism, crime and homelessness.

Toward the end of 2010 and after 15 months of Plan TBCero’s implementation, a 6.4 percent dropout rate was reported after having confirmed an evident increase in adherence to treatment. This was achieved through the constant and regular house calls performed by the joint family physician and health promoter teams.

As was mentioned above, an additional component that contributed to patient adherence was the fact that many of them were referred to the Relief House when they had problems with their treatment and to other social programs when they were found at risk. Exhibit 1 shows the change in the tracer indicator over time.

Exhibit N° 1

DROPOUT RATE OF TB PATIENTS RECEIVING TREATMENT WITH REGIMEN ONE*, SAN COSME HEALTH CENTER: 2007-2010



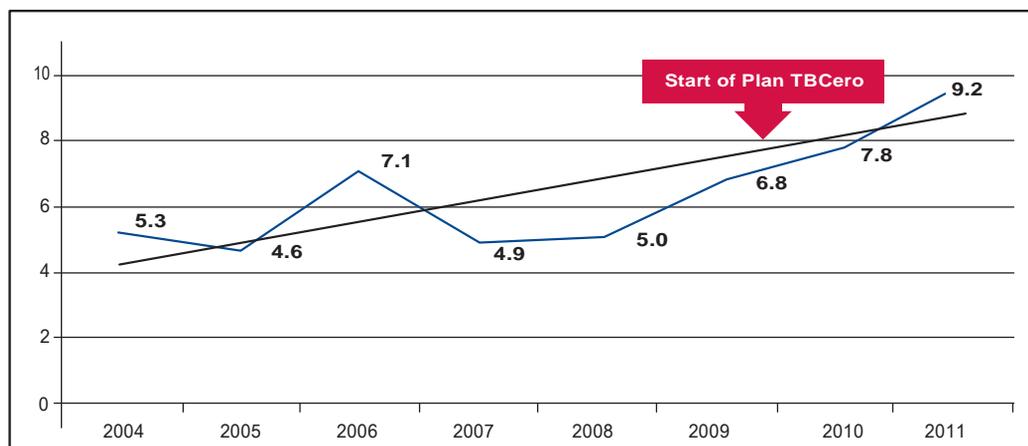
* Two months of daily rifampicin, isoniazid, pyrazinamide and ethambutol plus four months of biweekly rifampicin and isoniazid.

Source: San Cosme Health Center Tuberculosis Health Strategy. February 2012.

This also contributed to the detection of patients with respiratory symptoms, defined as any person who exhibits cough and sputum expectoration for more than 15 days. Likewise, “TB case” applies to any person who is or has undergone TB treatment under the supervision of a health care service. The national tracer indicator requires a value of at least 5 percent annually. In 2008 the San Cosme Health Center reached 5 percent and in 2011 went up to 9.2 percent. (See Exhibit 2.)

Exhibit N° 2

RATIO OF PATIENTS WITH RESPIRATORY SYMPTOMS IDENTIFIED FOR EVERY 100 CONSULTATIONS PROVIDED TO OUTPATIENTS OVER 15 YEARS OF AGE, SAN COSME HEALTH CENTER: 2004-2011



Source: San Cosme Health Center Tuberculosis Health Strategy. February 2012.

According to the TPA representative in La Victoria, the success evidenced in such short time, especially when it comes to reducing the dropout rate, is due to accompanying patients and following up on those affected. This is the result of having resumed a humanitarian approach to health care in the Relief House and through implementation of house calls by the TBCero team.

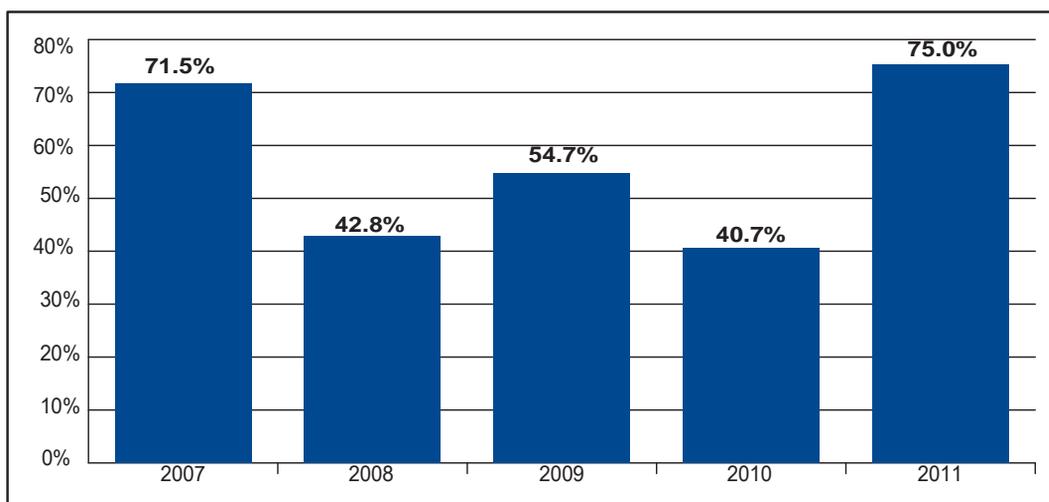
An indicator that has significantly increased refers to contact evaluation. When Plan TBCero was first implemented, only 30 percent of cases with contact study were reported. This percentage increased up to 75% by 2011. However, according to the person in charge of the health center TB strategy, this indicator is difficult to improve upon and demands great effort. (See Exhibit 3.)

“the best thing was that we increased contact examination. This indicator illustrates how many contacts we have evaluated. We were working with 30 percent or 40 percent values; with this indicator, I’m now working with 60 percent and 70 percent, and in a month I have come close to 80 percent... This is a great achievement.”

— Interview with Family Physicians and Plan TBCero Promoters

Exhibit N° 3

PERCENTAGE OF CONTACTS EXAMINED, SAN COSME HEALTH CENTER: 2007-2011



Source: San Cosme Health Center Tuberculosis Health Strategy. February 2012.

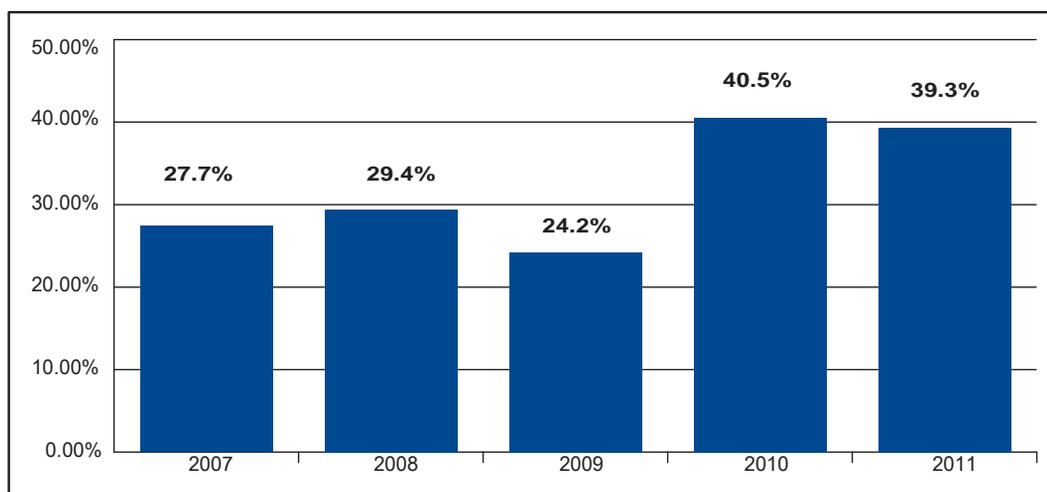
The increase in contact examination, chemoprophylaxis and adherence has caused a decrease in illness transmission. This will become evident in a cohort study and over a longer period of time. However, the perception of a change in this respect already exists among some team members. (See Exhibit 4.)

“when I joined the team, there were entire families taking medicines. But since the team arrived it has become very rare to see a whole family sick. I think the team interventions have made the family be a part of the treatment and part of the prevention process, which is what we want.”

— Interview with Dr. Pamela Canelo, Responsible for the TB Health Strategy at San Cosme Health Center

Exhibit N° 4

PERCENTAGE OF CONTACTS RECEIVING CHEMOPROPHYLAXIS, SAN COSME HEALTH CENTER: 2007-2011

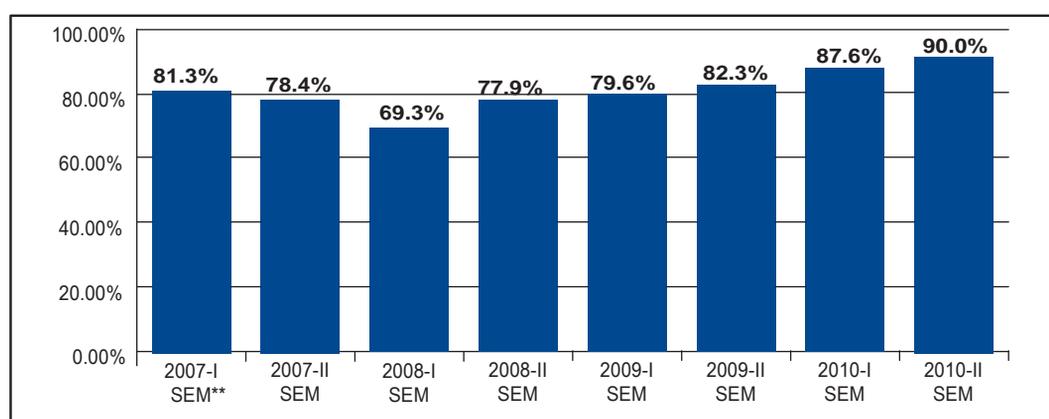


Source: San Cosme Health Center Tuberculosis Health Strategy. February 2012.

The cure rate for Regimen One has improved noticeably following implementation of the Plan, exceeding 90 percent by the year 2010. (See Exhibit 5.)

Exhibit N° 5

CURE RATE OF TB PATIENTS RECEIVING TREATMENT WITH REGIMEN ONE*, SAN COSME HEALTH CENTER: 2007-2011



* Two months of daily rifampicin, isoniazid, pyrazinamide and ethambutol plus four months of biweekly rifampicin and isoniazid.

** 6-month semester.

Source: San Cosme Health Center TB Health Strategy. February 2012.

Significant achievements are also displayed regarding the CA's strategy. At the time of systematization, 143 patients had been attended to, and no dropout had been reported.

“all our patients have had zero dropout. They have asked us to enter their homes and perform home visits.”

— Interview with Edith Matías, Municipality of La Victoria Social Development Manager

The Relief House had not registered social and economic health care information in a database aside from TB operational indicators. Together with the Relief House team, a retroactive process was conducted in which all the activities were registered based on log book entries and other sources. Any discrepancies detected in the information were considered missing data. The following table presents the processed data.

Table N° 2
COMPREHENSIVE CARE ACTIVITIES AND SOCIAL AND ECONOMIC SUPPORT TO PATIENTS AND FAMILIES

Type of Action Carried Out	Yes	%	No	%	Lost Data	Total
Follow-up home visits	142	99	1	1	0	143
Cases referred to La Victoria Women's Emergency Center and Municipal Ombudsman's Office for Children and Adolescents	13	9	130	91	0	143
Referrals to reproductive health services	15	10	128	90	0	143
Referrals to psychiatry and addiction management	9	6	134	94	0	143
Referrals to other services (nutrition, elderly, gastroenterology)	23	16	116	81	4	143
Help processing patient or family IDs	27	19	103	72	13	143
Assistance signing up for UHI	55	38	49	34	39	143
Food basket pickup information and follow-up (from Food and Nutrition Program for TB Patients and their Families, PANTBC)	81	57	11	8	51	143
Assistance to patients and their families in the admission to a home/shelter	5	3	137	96	1	143
Nutritional information assistance	143	100	0	0	0	143
Job training assistance	40	28	103	72	0	143
Assistance reintegrating into the job market	7	5	136	95	0	143
Access to furniture, clothing, toys	62	43	81	57	0	143

At the time of the Relieve House visit in December 2011, 99 percent of the 143 cases seen at the Relief House had undergone follow-up house calls. Thirteen cases with domestic violence or abuse had been referred to institutions such as the Municipal Ombudsman's Office for Children and Adolescents. Moreover, a high frequency of drug abuse and other mental disorders was found; 6 percent of these cases were referred to a psychiatrist, 10 percent to reproductive health clinics, and 16 percent to other health services. Furthermore, 19 percent of the cases received assistance processing IDs, and 38 percent received help signing up for universal health insurance.

Additionally, 87 patients had received orientation and follow-up to access the food basket distributed by the National Food Assistance Program (PRONAA). Five patients were assisted in committing themselves or a family member to a home or shelter. Forty patients have been trained to reenter the work environment in better condition, and seven patients received support gaining job access. Two out of five patients have received some form of help with goods such as furniture, clothing, or toys.

These figures show how the teams have become increasingly involved in comprehensive care according to individual patient and family needs. A recent experience for information retrieval and response operationalization was the use and analysis of “familiograms” (census and reconnaissance of families living in Cerro San Cosme, intended for a complete intervention). This strategy is being implemented with the support of DISA V Lima City.

In these two years since the start of Plan TBCero, impressive results have been obtained in the TB Strategy tracer indicators. A complementary working team has been installed, creating synergy with the health service and with community and home attention. This has enabled a greater detection of patients with respiratory symptoms as well as a faster onset of treatment, with home verification in less than 24 hours. It also allowed for strict contact control within the home, paying special attention to co-morbidities and other latent health problems.

Moreover, the decrease in cases seen in the Relief House has been investigated and data has been collected; this decrease is a result of the comprehensive care received by the patients at the CA. The treatment has been considered from the perspective of family units as the object of evaluation, focusing also on aspects related to the socio-economic and emotional situation of the patients and their families. Finally, some patients have been introduced to social programs in order to reduce the isolation in which they lived.

These are just some preliminary results of the implementation of Plan TBCero through the application of its program innovations. These findings assume that the Plan’s continuance and monitoring will make visible a positive impact in the medium term on both prevention and treatment and recovery of TB-affected persons in the district of San Cosme, and a long-term progressive control of the disease.



SECTION 6. PROCESS ANALYSIS AND LESSONS

6.1 The Need for Innovation

The Plan's initial theoretical conception has not been completely fulfilled. Instead, innovations in differentiated care have occurred with a stronger and progressively more unified team, and with the Municipality of La Victoria's participation in supporting the Relief House as it complements stage two of TB treatment. A first observation of the innovation is that Plan TBCero's lifecycle as described is in continuous construction, a permanent dialectic between thinking and doing. It was not possible to carry out many of the central ideas, such as organizing a broad-based roundtable with various actors involved, due to diverse interests that were at play. The Plan, however, led to an association between DISA, Municipality of La Victoria, and the San Cosme Health Center as the heart of successful interventions during the first years of the Plan.

Plan TBCero is born out of the need to improve responsiveness. It was not the result of mere intellectual curiosity, but was rather a mobilization by health authorities and professionals; it rose from local operators who felt the need to change the way in order to redirect it. This conviction was nourished by personal experience and knowledge, and a vision for change was founded. That is perhaps how the name of the Plan stated the main goal or dream, and not a particular change method or strategy.

Regarding the strategies and tactics developed, two initial criteria converged. The first is an almost universal knowledge shared by all the actors recognizing the imperative need for new human resources to complement the basic team which had been making its best efforts at San Cosme Health Center. The second criterion stipulates that using the formal work methodology as had been instituted was inappropriate or too slow and did not represent a tangible solution, making it necessary to innovate. From this need arose the concern to involve the Municipality so as to provide additional human resources that would implement the proposed innovations.

Three innovations that were clearly identified by internal and external actors can be cited:

- 1. DISA V Lima City and Municipality of La Victoria partnership: New approaches and new inter-institutional relationships.** Plan TBCero has constituted for the local government a new role in health that includes tangible political and financial responsibilities, which also suggests a new relationship between the two governments.

The Plan's technical responsibility falls on DISA V Lima City, while political responsibility rests on the Municipality. Regarding implementation, the TBCero team has received financing and resources from the DISA, while the Relief House is fully funded by local government resources.

2. Incorporation of the TBCero Team into the San Cosme Health Center: New roles for family physicians and health promoters.

The supplemental extramural work team involved family physicians and health promoters who visited the community, roamed the area from house to house, performed preventive actions, followed up on cases, and provided homecare to those with extreme vulnerability or to people who could not approach the health center due to a disability.

- a. Family physicians were ambulatory doctors who were in charge of examining patients with TB and other diseases, evaluating not only the person who was sick but the whole family as well. They connected with the community in a zone where social relations are difficult and where risk and distrust prevail.
- b. The health promoter role also brought considerable changes in an environment that still proposes community promotion as an unpaid action. These promoters were hired with a pre-established salary and full-time hours. Their experience working in the streets has trained them for community work, while their work at the health centers has prepared them to relate with health personnel. Additionally, being culturally equal to the potential beneficiaries, belonging to the community ensures their knowledge of the local street rules.
- c. It is noteworthy that this new configuration of necessary skills for the family physician came into conflict with the current array of skills for general practitioners, where health promotion and prevention are still not included in the prevailing biomedical recovery focus. Therefore social analysis skills, communication strategies, community education, conflict resolution and community participation should be part of the doctors' formation or at least should be given more importance. Family physicians challenge the prevailing medical formation as they position themselves with a new function of preventive medicine in the country.

3. Opening and Operation of the Relief House: The New Role of the Municipality in the Health of the Populations.

Including a center for the care of drug-sensitive patients with a negative smear who are in their second stage of TB treatment is the first experience of the Directly Observed Treatment at a community level. The Relief House is installed seeking to provide high-quality comprehensive care, recognizing in every sick patient a potentially sick family, and in each individual case a potential social problem. Hence the importance given to psycho-emotional and socio-economic support provided to each family. Monitoring the cases closely has been a key factor, for it made it possible for there to be no abandonment in the 143 cases seen.



BUENAS PRACTICAS

SEMPEÑO

SECTION 7. CONCLUSIONS

Having reconstructed the history of these first two years of Plan TBCero, and having identified its innovations, it is now important to highlight the main elements enabling the actions.

- a.** From a political and health point of view, Plan TBCero has effectively improved the quality of care for people with TB diagnosis at the San Cosme Health Center as a result of an interaction between the health sector, local government, and civil society. This success is reflected in a favorable impact on the TB Health Strategy's operational indicators and on the positive perception of the implementers and patients themselves.
- b.** A key element in developing and implementing Plan TBCero was the political-strategic commitment shown by the DISA V Lima City authorities as early proponents of the process and the commitment displayed by the TBCero team and the TB Strategy San Cosme Health Center team.
- c.** Another equally important element is the alignment of strategic political interests of the DISA V Lima City and the Municipality of La Victoria. In the fight against TB in San Cosme, the Municipality has found a political strategy for State insertion and presence in an area of high social conflict, powerful criminal organizations, and highly excluded populations. This has been instrumental in the Municipality's commitment. For the DISA this partnership meant greater opportunities for innovation, with more power and greater resource management by reducing the bureaucratic procedures of the health sector.
- d.** The strengthening of community participation is still pending, promoting the organization of those affected as part of the political inclusion and multisectoral participation of the State and civil society that the very approach of the Plan initially proposed.

The current working conditions at the Ministry of Health subsector were the greatest impediment to the integration of the new TBCero team. On the one hand, facing an unequal pay scale compared to the teams already working at the health center created difficulties accepting the new resources. On the other hand, the constraints regarding the recognition of all newly hired workers' labor rights delayed both teams' integration.

- a.** The DISA-Health Center bond has been strengthened; Plan TBCero's management scheme has been generated by a DISA V Lima City initiative with an extremely important political, strategic and financial commitment directly implemented by the San Cosme Health Center.

- b.** Valuable actions such as providing socio-economic aid to the patients who went to the Relief House has been part of the Plan's positive results.
- c.** Plan TBCero is largely the result of an innovation in human resources, for not only does it include more staff, but, chiefly, an innovation with new roles assigned to doctors and promoters. The new role of the family physician and TBCero promoter focuses on a doctor outside the health service environment dedicated to promotion activities in families and communities and on a promoter included in a dedicated travelling team.
- d.** Perhaps the greatest barrier to implementation of TBCero activities was the reluctance of senior officials at the ESNPCTB to adopt the new initiative. This resistance overstrained the teams working at the health center and inhibited inter-institutional bonds between political, academic, and other institutions.
- e.** Support and legitimacy for Plan TBCero was therefore championed by academic and professional associations. These associations adamantly advocated for Plan TBCero within various professional unions and were able to garner widespread support for its implementation.

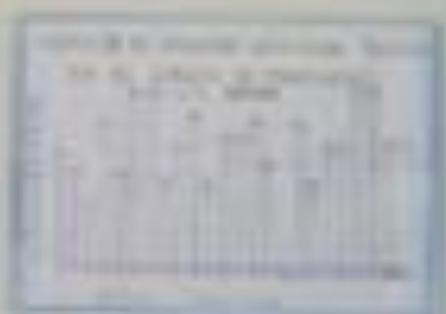


SECTION 8. REMAINING CHALLENGES

- a.** One of the Plan's strategic actions was to decentralize TB patient care and incorporate a TB treatment administration reference site outside of the health facility, called a community DOTS. This implied a treatment administered and directly observed by a qualified and authorized community agent. This action makes it absolutely necessary to obtain the National Health Strategy's approval and support in order to sustain innovation, intensify the changes, and extrapolate learning to other committed areas of Lima with similar characteristics.
- b.** It is necessary to encourage the institutionalization of the links between different governmental social programs, bonds that are not the product of some involved officer's personal disposition but are rather a recurring and synergistic practice between the programs that will maximize their benefits.
- c.** In a strategy that differentiates between drug-sensitive and MDR-TB care, as has been the case in the San Cosme health strategy, an important missing factor was the innovation related to improving the service's diagnostic capacity by incorporating the universal nature of sensitivity testing. This poses a pending challenge to Plan TBCero, to the extent that it can ensure greater therapeutic efficacy from an early TB diagnosis in all its forms.
- d.** Just as innovation calls for change, institutionalization needs familiar paths. In this second moment it is important to reflect on the role played by local bodies such as the health Network and Micro-network and their impact on the Plan's future.
- e.** Many of the activities carried out by Plan TBCero teams (family physicians, promoters, and Relief House team) have not been systematically registered, given that the tangible sources of information are limited. This makes it difficult to document advances in the innovations.
- f.** In this new administration, DISA V Lima City has been able to include the entire TBCero team in service management contracts. Achieving job stability and proper working conditions for the team is a challenge. It becomes necessary to reinforce participatory ties for the next stage of Plan TBCero in order to promote the organization of those affected who are being treated under the Plan's new conditions as part of the political inclusion and space to exercise citizenship.
- g.** The challenge of working with the social determinants of the disease is an ongoing process. In these first years a health and community strategy has been developed

that complements the health service, which has greatly improved patient care and treatment. Cases are identified sooner thanks to community cooperation, and efforts have been made to overcome exclusion and treatment delaying by the affected families. However, work on the social determinants involving processes for urbanization and improving the quality of life for potential victims is still a work in progress.

- h.** The logical framework drawn up for Plan TBCero had relative validity, as its design was a necessity perceived from the outside. Its lack of use somehow reflected a reluctance to formalize its indicators and goals of turning information into action. This is perhaps the greatest weakness of Plan TBCero when it comes to publicizing its success.
- i.** One of the remaining challenges for the team, in this new context of novel coordination and management, is to present Plan TBCero and advocate for the institutional support necessary to sustain the innovations, deepen the changes and extrapolate what was learned to other areas also affected by the epidemic.
- j.** Another challenge is to better protect the individuals implementing Plan TBCero through improved ventilation systems and promoting the use of masks in patient care. The goal is to generate more empathy with the patients, equip health center facilities with better light and ventilation, and provide health insurance to all health personnel.



SECTION 9. LESSONS LEARNED

- a.** The implementation of Plan TBCero presents significant lessons regarding health and its determinants, such as the implications of changing the traditional notions of health, sickness and the responsibilities allocated to different entities of the public sector.
- b.** Plan TBCero shows how a change in philosophy regarding the processes of health and disease can generate changes in health care, new stakeholders (namely a direct involvement of the local government), and new responsibilities for actors involved in the control and prevention of the disease by right of office.
- c.** For Plan TBCero to be maintained, it is essential to enhance working conditions for all members of the operational team so that they achieve a greater connection to Plan TBCero.



SECTION 10. RECOMMENDATIONS

- a.** The approach to introducing new intervention models such as Plan TBCero should always occur within a set of programmatic conditions: detection, diagnosis, and treatment. Multisectoral participation is a basic requirement for institutionalizing and sustaining intervention benefits.
- b.** Acknowledge the social determinants of TB and their impact in order to transform the conditions of urban life and social inclusion within the population.
- c.** Continue negotiations with the Municipality of La Victoria to address determinants that have not yet been modified, such as: a) living conditions; b) job offers to patients and their families; c) nutrition; and d) basic services such as water, drainage, and waste disposal.
- d.** Institutionalize innovations achieved through resolutions and decrees and through the allocation of a budget in order to avoid future dependence on the political will of any specific authority.
- e.** There is a need to set up practical tools and systematic registration processes, beginning with those who are implementing the Plan. These instruments should be designed and vetted with the teams that implement the Plan and should be used on a daily basis to identify the degree of progress.
- f.** It is important to level wages and improve social and cultural working conditions for those involved in Plan TBCero in order to sustain and unite the teams, strengthening their inventive skills when it comes to everyday problem solving. For this it is essential to improve access to programs and resources that enable and enhance their actions.
- g.** Consider replicating the Plan TBCero experience in areas with similar social TB determinants, such as El Agustino, El Cercado de Lima, Callao, and areas of San Juan de Lurigancho. The National TB Health Strategy should take the lead in this expansion process.
- h.** Strengthen the alternative nature of the family physician-health promoter partnership in terms of their health promotion and prevention strategies, thus reinforcing their social activism.
- i.** Establish a link between educational institutions and their commitment to accept the challenge of providing a more comprehensive training of family physicians, strengthening their ability to systematize experiences and implement action research methodologies as well as strategies for continuous quality improvement, social program management, strategic planning, education for sustainable development, and changes in behavior and communicational strategy development.



SECTION II. KEY ELEMENTS FOR THE SUCCESS OF THESE INTERVENTIONS IN AREAS WITH SIMILAR CHARACTERISTICS

- a.** Commitment from the local health authorities in providing a comprehensive response for TB prevention and control that involves planning, management, and financing of innovative activities.
- b.** Advocacy and negotiation skills with other State actors involving regular meetings, presentations, and exchanges where plans are presented and an attempt is made to commit political will and resources.
- c.** Recognition by the local government that health, namely the existence of TB in the area, can be used as an opportunity to generate political presence in the community.
- d.** Recognition that health services with high TB caseloads and scarce human resources but with authorities and professional teams willing to accept innovations and support processes that transcend the standard or traditional cultural patterns can be an ideal place to achieve successful implementation of such strategies.
- e.** A community with high population density and a skeptical disposition regarding health services, but that is able to establish new arrangements with health care providers, can bring about changes in a given situation.
- f.** Availability of human resources and trained health professionals who are willing to take on new challenges and roles and whose labor rights are guaranteed in order to solidify and institutionalize improvements made.
- g.** A supply of health promoters in the community who have a background in health promotion and are recognized by the local population.
- h.** An environment of national authorities who are favorable to the innovations and willing to provide regulation and stewardship. This will enable new actions in support of a more comprehensive response to TB.

- i. A community-based work ethic built through a transformation project that may or may not be ideological, spiritual, or religious yet nonetheless provides a sense of unity and significance to team members who work at different levels.
- j. Strong community participation in the planning, managing, and evaluation processes of the intervention.



ANNEXES

ANNEX I

San Cosme Health Center Team Members

ESL PyC TB MEMBERS

Dr. Pamela Canelo Marruffo	Head of Estrategia Local de Prevención y Control de
TB Dr. Eloy Maier Valencia Reyes	Co-responsible for the ESL PyC TB
Graciela Pescoran Ross, R.N.	Responsible for the MDR-TB Area
Ana Lia Castillo Firma, R.N.	Responsible for the Drug-Sensitive TB Area
Julia Saavedra, R.N.	Drug-Sensitive TB Area Team
Teófila Damian, Social Worker	Responsible for the Social Area
Gianina Vicente, Psychologist	Responsible for the Area of Psychology
Elva Nacarino, Psychologist	Responsible for HIV Counseling Silvia
Maldonado, Nutritionist	Responsible for the Area of Nutrition
Martin Blas, Lab Technician	In charge of the Smear Microscopy Lab
Lázaro Gabriel de la Paz, Nurse Aide	Responsible for the X-Ray Area

PLAN TBCero STAFF

Dr. Nestor Huiman Dávila	San Cosme Family Physician
Betty Apari Mallqui	Health Promoter
Dr. William Rojas Martínez	San Cosme Family Physician
Melina Tiza Ayala	Health Promoter
Dr. Franz Llacza Mayorca	San Cosme Family Physician
Betty Martel Acuña	Health Promoter

Relief House (MUNICIPALITY OF LA VICTORIA) STAFF

Lic. Carla Moreno Soto	In charge of the team
Lic. Carmen Sulca Cárdenas	
Tec. Enf. Laura Hidalgo Olivos	Nurse Aide
Tec. Enf. Janeth Meza Gamarra	Nurse Aide

ANNEX 2

Key Interviewed Actors and Documents

I. Individual Interviews

First and Last Name	Institution/Organization	Current or Former Position
Dr. Alberto Gayoso	III Regional Council of the Peruvian College of Physicians	Former Dean
Dr. Carlos Alberto Mendoza Ticona	USAID Peru Quality Healthcare	Infectious Disease Team Leader
Dr. Eduardo Rumaldo	San Cosme Health Center	Head
Dr. Eduardo Ticona Chávez	Peruvian Infectious and Tropical Diseases Association; and Department of Medicine, Universidad Nacional Mayor de San Marcos	Former President; Professor
Dr. Guillermo Frías	USAID Peru Quality Healthcare	Regional Operations Manager
Dr. Luis Alberto Fuentes Tafur	Lima City Health Directorate (DISA Lima City)	Deputy Director, DISA V Lima City
Dr. Percy Maldonado	San Cosme Health Center	Plan TBCero doctor
Dr. Pamela Canelo	TB Prevention and Control Health Strategy, San Cosme Health Center	Coordinator
Rosario Núñez, Psychologist	Adolescents and Mental Health, DISA V Lima City	Coordinator
María Taipe Aylas, Nutricionist	People's Health Directorate, DISA V Lima City	Member of the technical team
Melissa Daga, R.N.	People's Health Directorate, DISA V Lima City	Member of the technical team
Julio Mendigure, R.N.	Peruvian College of Nurses	Former Dean
María Núñez	Family Health Strategy, DISA V Lima City	Coordinator
César Jesús Alva	TPA La Victoria	Representative
Edith Matías	Social Development Division, Municipality of La Victoria	Manager
Ivette Otárola	Health Department of the Social Development Division at the Municipality of La Victoria	Head
Dr. Oswaldo Jave	ESNPCTB	National Coordinator
Dr. Virginia Baffigo	Global Fund Projects Management Unit – CARE, Peru	Manager
Dr. Eduardo Gotuzzo	“Alexander von Humboldt” Tropical Medicine Institute, Universidad Peruana Cayetano Heredia	Director, Professor and Investigator
Dr. José Best	National Penitentiary Institute	Responsible for Health Area
Dr. Ciro Maguiña	Peruvian College of Physicians	Dean

2. Group Interviews

Group/Organization/Criteria	Number of Interviews
Plan TBCero Family Physicians	1 recorded interview
Plan TBCero Promoters	1 recorded interview
Plan TBCero discharged patients	3 recorded interviews

3. List of Written Documents and Photo Gallery

Document information. In coordination with the DISA V Lima City team, the revised and encoded documents have been listed for their use in the descriptive analysis, together with their respective citations.

Documents	Location
Program Regulations – Resolutions, Agreements	Program Web page
DISA V Lima City meetings logbook	DISA V Lima City
Memory book	Relief House (Casa de Alivio)
Operational reports for each period	San Cosme Health Center
Dr. Fuentes Tafur’s article “Sociopolitical Approach to TB Control in Peru”	Peruvian Journal of Experimental Medicine and Public Health, 2009; 26(3): 370-379
DESP DISA V Lima City article: “An innovative approach: Plan TBCero in La Victoria” (May 2011)	Web page
Picture gallery	DISA V Lima City
Logical framework	DISA V Lima City

