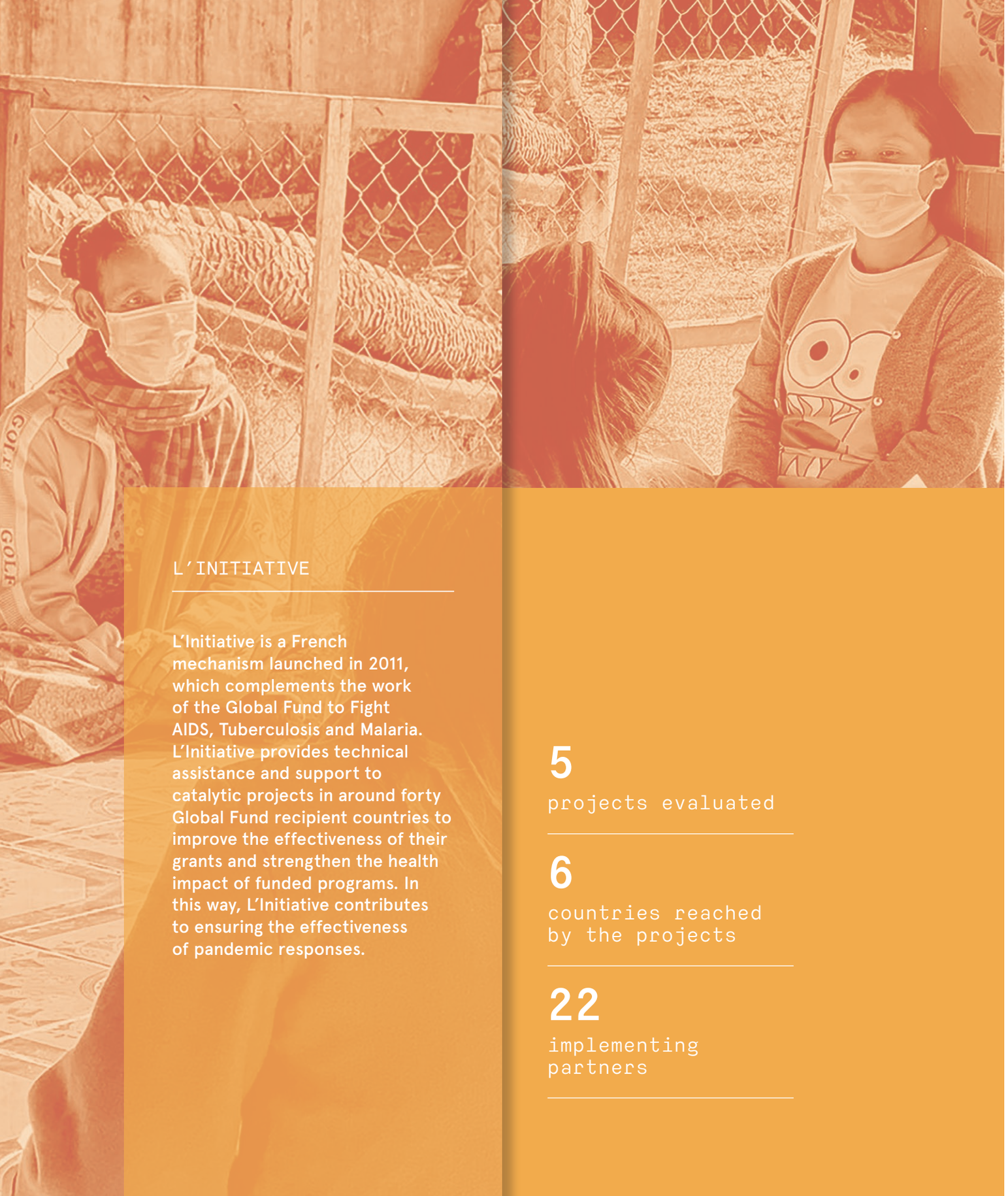
Tuberculosis

CROSS-CUTTING PROJECT EVALUATIONS

EXPERTISE FRANCE
GROUPE AFD

L'INITIATIVE
sida, tuberculose, paludisme



L'INITIATIVE

L'Initiative is a French mechanism launched in 2011, which complements the work of the Global Fund to Fight AIDS, Tuberculosis and Malaria. L'Initiative provides technical assistance and support to catalytic projects in around forty Global Fund recipient countries to improve the effectiveness of their grants and strengthen the health impact of funded programs. In this way, L'Initiative contributes to ensuring the effectiveness of pandemic responses.

5
projects evaluated

6
countries reached by the projects

22
implementing partners

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Cross-cutting project evaluations

L'Initiative launches annual calls for projects, through which around twenty projects are selected. External final evaluations are required for all funded projects. In order to make the most of these comprehensive exercises, L'Initiative has put in place a thematic cross-cutting evaluation mechanism for projects. This enables reporting on the use of Ministry of Europe and Foreign Affairs funds to highlight L'Initiative's interventions, as well as drawing out learning to improve interventions contributing to the response to the three pandemics and to inform future activities.

KEY DATA

from the «Tuberculosis» cross-cutting evaluation

Total budget for the projects:

€6,012,792

5
projects evaluated

6
countries reached by the projects

22
implementing partners

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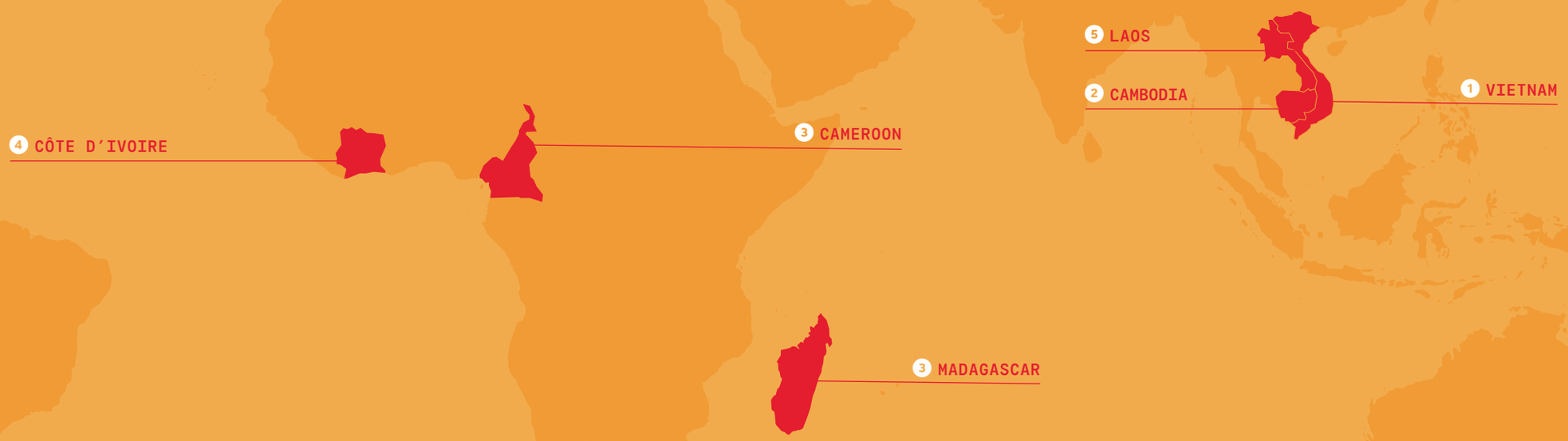
The evaluated projects



1 VIETNAM – 2020-2023

Zero TB Viet Nam Health economic & Operational Performance Evaluation (ZTV HOPE)

PROJECT LEAD
NATIONAL TUBERCULOSIS CONTROL PROGRAM (NTCP)

PARTNERS
FRIENDS FOR INTERNATIONAL TB, HAI PHONG UNIVERSITY

2 CAMBODIA – 2019-2024

Optimizing latent Tuberculosis Treatment initiation in Cambodia among people living with HIV - (OPTICAM)

PROJECT LEAD
INSTITUT PASTEUR DU CAMBODGE

PARTNERS
NATIONAL CENTER FOR HIV/AIDS, DERMATOLOGY AND STD (NCHADS), NATIONAL CENTER FOR TUBERCULOSIS (CENAT), CLINTON HEALTH ACCESS INITIATIVE (CHAI)

3 CAMEROUN, MADAGASCAR – 2021-2024

Improving management of tuberculosis infection (APRECIT)

PROJECT LEAD
FONDATION MÉRIEUX

PARTNERS
CAMEROON: CENTRE PASTEUR DU CAMEROUN (CPC), CAMEROON NATIONAL ASSOCIATION FOR FAMILY WELFARE (CAMNAFAW), ASSOCIATION DES FEMMES ACTIVES ET SOLIDAIRES (AFASO), NATIONAL AIDS CONTROL PROGRAM (NACP), NATIONAL TUBERCULOSIS CONTROL PROGRAM (NTCP)
MADAGASCAR: INSTITUT PASTEUR DE MADAGASCAR, FENOARIVO UNIVERSITY HOSPITAL AND ANALAKELY UNIVERSITY HOSPITAL FOR CARE AND PUBLIC HEALTH (CHUSSPA)

4 CÔTE D'IVOIRE – 2021-2023

«Ya pas drap» - consolidating and expanding adapted, integrated and accessible health care provision for people who use drugs in risky situations, who are vulnerable to the three pandemics

PROJECT LEAD
MÉDECINS DU MONDE

PARTNERS
ESPACE CONFIANCE, ASSOCIATION DE SOUTIEN À L'AUTO-PROMOTION SANITAIRE URBAINE (ASAPSU) AND ENDA SANTÉ

5 LAOS – 2020-2023

Supporting community-driven achievement of the End TB Strategy in 2 Provinces of Lao PDR

PROJECT LEAD
COMMUNITY HEALTH AND INCLUSION ASSOCIATION (CHIAS)

PARTNERS
HUMANA PEOPLE TO PEOPLE LAOS (HPPL)

Introduction

This document provides an overview of results from a cross-cutting evaluation of five projects funded by L'Initiative focused on tuberculosis (TB).

In 2023, the World Health Organization (WHO) estimated that 10.8 million people contracted TB, an increase of 4.6% compared to 2020. The WHO «End TB» strategy aims to achieve a 95% reduction in TB mortality and a 90% reduction in TB incidence by 2035, compared to 2015. However, TB screening and prevention milestones are not being met. The main obstacles are a lack of funding for TB control globally, inadequate levels of TB identification, and slow progress around prevention. In addition, there is some reluctance among key actors to change policies and practices in the TB response.

It was against this backdrop, L'Initiative launched a call for projects in 2018 to fund operational research projects aimed at improving the effectiveness of tuberculosis screening, treatment and prevention. The five projects, three of which were selected under this call for projects, have developed different approaches to combatting TB. The three operational research projects compared approaches or biological tests linked to TB prevention through TB preventive treatment (TPT). The other two projects focused on implementing pilot TB screening activities with key populations with a view to scale up. This cross-cutting evaluation has examined these projects to draw out lessons that contribute to eliminating the pandemic.

Glossary

→ **Populations vulnerable to TB:** according to the Global Fund, people in prison, people living with HIV, migrants, refugees, miners and other people that live and/or work in poorly ventilated environments, and indigenous populations are all extremely vulnerable to TB. These population groups may also be significantly marginalized, have reduced access to quality services and experience human rights violations. This evaluation also covers people who use drugs, people with diabetes, people living in rural areas, people over 50 and people with weakened immune systems.

METHODOLOGY

This evaluation was carried out by HMST between June 2023 and April 2024. A team of three experts in public health, tuberculosis and project evaluation carried out the evaluation.

The evaluation involved:

- **→ an individual evaluation of each project on the ground ;**
- **→ a cross-cutting analysis of the results, to enable lessons and good practices to be drawn from the projects evaluated and to identify the essential attributes of projects contributing to the tuberculosis response, with the aim of learning from this and improving the quality of future interventions ;**
- **→ a co-creation workshop to develop recommendations in March 2024 with the lead organizations from the projects evaluated, team members and the L'Initiative Steering Committee. The workshop enabled the lessons and recommendations presented in this publication to be identified collaboratively.**

AREA 1

Key TB screening and prevention challenges

"Strong engagement of the community and of TB specialist health staff, and good collaboration to implement active case finding and contact monitoring a household level, were important factors for future work. These approaches foster community engagement and strengthen collaboration between local actors and the health system"

ZTV HOPE project, final evaluation report

TB remains a major threat to global public health. The WHO's 'End TB' strategy focuses on universal, people-centered access to integrated screening-diagnosis and care, as well as TB prevention. All the projects evaluated focused on one or both of these two priority areas to improve the impact of the approach on TB incidence and transmission: prevention, in particular through tuberculosis preventive treatment (TPT), and systematic screening of vulnerable populations.

Contribution to resuming TB screening post-COVID-19

The discrepancy between the number of detected and reported cases and the estimated number of people who develop TB each year makes it possible to calculate the number of «missing» cases and screening coverage.[1] Coverage decreased due to disruptions caused by the outbreak of COVID-19: the total number of people diagnosed decreased by 18% between 2019 and 2020. Resumption of activities in 2021 and 2022 was not sufficient to reach pre-COVID-19 levels.

The five projects evaluated all include a screening component, therefore contributing to the post-COVID 19 «catch-up». **The Ya pas drap, APRECIT and ZTV projects achieved TB notification rates among at-risk groups over ten times higher than the national incidence in the general population.** The ZTV project increased the detection rate of TB cases by 5% compared to control areas and covered an at-risk population of 1.2 million people in 2022.

1. For several years, WHO has estimated that more than 10 million people develop TB every year worldwide.

Coverage of TB preventive treatment among eligible populations

Preventive treatment is recognized as an effective intervention for latent TB infection, which reduces the risk of developing TB from 60% to 90%[2] Although TPT is recommended by key international institutions, such as WHO, the Global Fund, UNAIDS and UNICEF, coverage remains low among eligible priority populations, namely contact cases, with contact cases under the age of five and people living with HIV (PLHIV) being the priority. Only two of the projects evaluated included a TPT prevention component. The OPTICAM project managed to double TPT coverage, from 41% in 2021 to 90% in 2022 across eight care sites in less than a year.[3] The ZTV project increased TPT take up in the project areas by 89% compared to the control areas. Prior to the launch of the project, active case finding and TPT implementation strategies were not implemented in these provinces. These results show the ZTV project's effectiveness in terms of strengthening TB screening and access to TPT, contributing to significant improvements in patient management.

Screening-prevention continuum using TPT

Screening and prevention using TPT must involve a combined package of complementary interventions with the same priority level. Screening for TB infection and disease should not happen without TPT prevention and vice versa. All of the projects evaluated developed a TB screening and/or prevention component aligned with each country's National TB Control Program's (NTCP) National Strategic Plans (NSP), in line with international WHO standards. However, only one project (ZTV) addressed the screening and prevention/TPT continuum by integrating both into their activities. The other four projects did not have comprehensive screening and prevention continuums.

2. https://tbksp.who.int/fr/node/634
3. See the 'Best practice' insert in Area 3.
4. Data available at the time of the final evaluation.

Integration into national strategies

Although aligned with national guidelines, the approach rolled out in these four projects was often either not implemented or only implemented at a low level, nationally. For example, community TB screening in Laos (CHIAS) was not well developed, screening for people who use drugs did not happen outside of the Ya pas drap project in Côte d'Ivoire, TPT for PLHIV in Cambodia was lacking outside the OPTICAM project, monitoring of adult contacts of cases was not carried out in Cameroon (APRECIT). However, due to a lack of collaboration with the NTCPs, the evaluation did not identify a link between positive project outcomes and their application in national strategies. In Laos, an information system was used that was different to the national DHIS2 system, which prevented links with the NTCP. The lack of data analysis on TB in Côte d 'Ivoire and TPT in Cameroon/Madagascar prevented NTCPs from incorporating results to make potential changes in strategy.

Community engagement around TB prevention and screening

The critical role that community actors play in global efforts to reach TB screening and prevention target groups is widely recognized. **All the projects evaluated responded to the need to meaningfully involve communities and community actors.** Community health workers (CHWs) involved in the five projects have received capacity strengthening from project leads, have acquired new skills and have been able to implement screening and prevention activities. The CHIAS project has the largest community-based coverage with 186,771 people screened through home visits and family surveys around index cases by CHWs. In addition, 364,765 people received information on TB and HIV[4].

Inclusion of vulnerable populations

Vulnerable populations targeted by projects

	Contact case	PLHIV	People who use drugs	People in rural areas	> 50	People with diabetes	Sympto-matic	Hyper-tension	Covid 19
ZTV	x				x	x	x	x	x
Ya pas drap			x						
OPTICAM		x							
APRECIT	x								
CHIAS				x					

The cross-cutting evaluation found satisfactory levels of key or vulnerable population inclusion in the five projects evaluated. The project target populations were selected according to criteria around high incidence of TB among these groups and/or lack of access to screening or prevention. Projects were able to adapt to these population groups and put in place different strategies, in particular community-based strategies, to reach them. In Côte d `Ivoire, the Ya pas drap project was able to provide care to people who use drugs through a range of targeted interventions, which combined mobile activities (outreach, tailored interventions in smoking rooms, community monitoring of patients on treatment) and activities in static settings in five specialist integrated centers. At the time of the evaluation, 8,021 people who use drugs, including 1,085 women, had been reached by interventions[5]. In addition, 470 TB cases were identified among people who use drugs, a reporting rate 39 times higher than the WHO estimated incidence rate in the general population[6]. Tailored mobile interventions have made it possible to reach people who use drugs in their environment, to increase their awareness, including about their rights, and to provide care and psychosocial support.

Gender approach

Men are more at risk of developing TB than women, due to a physiological and immunological tropism of the TB bacillus for men and higher risk factors (tobacco consumption, alcohol and diabetes). None of the projects evaluated took these gender differences into account and did not adequately address the specific risks and vulnerabilities of men. The ratio of men to women (M/F) in terms of infection or screening has also not been analyzed. In the CHIAS project, the M/F positivity ratio of GeneXpert tests indicates that men are tested later than women - at a later stage of the disease. This indicates the need for a screening approach that encourages men to be tested earlier for symptoms. Data analysis of the ZTV project shows that men are more likely to move from infection to disease than women, but this is not explored.

5. Data available at the time of the final evaluation, 6 months before the end of the project.

6. 4,832 TB cases per 100,000 people who use drugs in the project, compared to 123 TB cases per 100,000 inhabitants (WHO estimate).

AREA 2

Main barriers to TB screening

"I have a team of about 10 peer educators that I supervise. We identify suspected TB patients and collect sputum samples. We check the quality of the sputum as well labeling the container. For confirmed tuberculosis patients, there is differentiated management approach. The supervisor takes the drugs to the health center and distributes them to peer educators looking after patients. Peer educators then find their patients in the smoking rooms to give them their medicines and organize follow-up."

Community TB Supervisor, Ya pas drap project

The cross-cutting evaluation identified five recurring barriers to TB screening in project implementation:

1. Intensive TB screening requires **identifying vulnerable populations and key populations most at risk of developing TB, as well setting out cost-effective, realistic ways of reaching these populations** by going to where they are located or by getting them to come to screening services.
2. **Asymptomatic active TB cases** account for 50% of TB cases in prevalence surveys[7] and are not detected through symptomatic triage. The systematic use of x-rays as a first-line procedure is an essential intensive screening approach. Only the ZTV project set up x-ray triage to screen for asymptomatic TB. The other four projects used a symptomatic triage approach, which missed asymptomatic TB cases.

7. https://www.who.int/teams/global-tuberculosis-programme/diagnosis-treatment

GOOD PRACTICE
COMMUNITY APPROACHES TO REACH VULNERABLE POPULATIONS

The project implemented by CHIAS aimed to address several challenges in the TB response in Laos, including low uptake of care, limited access to diagnosis in remote areas and a scarcity of resources for screening interventions. To address these barriers, community-based approaches have been put in place, such as home screening, accompanying people with presumed TB to clinics, and training community health workers on screening and treatment adherence support. This approach identified 798 TB cases in 2.5 years. CSOs contributed on average to 41% of TB case notifications over three years in the two affected provinces. In 2023, in Bolikhamxai, 90% of reported TB cases were identified by CHWs, confirming the importance of community-based interventions to strengthen case detection and facilitate access to care, especially in remote areas. Community support has also played a key role in treatment adherence.

3. **Challenges accessing adequate health facilities for TB screening** is a particular issue for key populations included in the projects evaluated (people who used drugs, minority groups, people in rural and poor peri-urban areas). There is a definite geographical gap between where these populations are located and health facilities. In the projects evaluated, access to digital x-rays and rapid molecular tests was particularly problematic since both of these tests were only available in static care facilities in district or regional hospitals.
4. The **long delays in seeking care** among the population are linked to their habits, behaviors and knowledge of TB. This is a significant barrier to screening. The evaluation did highlight early detection of TB cases in the five projects, particularly in the CHIAS project, even if it was not being measured.
5. The ambitious targets set at project start-up were often difficult to achieve. There were sometimes difficulties demonstrating the attribution of screening to the project.

AREA 3

Main barriers to TB preventive treatment

"Prior to the project being launched, active case finding and TPT implementation approaches were not implemented in these provinces. The results show how effective project interventions were at strengthening TB screening and access to TPT, and its contribution to significant patient management improvements."

ZTV HOPE project evaluation report

The cross-cutting evaluation identified the following lessons learned around TB prevention using TPT during project implementation:

1. **Health professionals are reluctant to prescribe TPT.** In addition to a lack of awareness of the benefits of TPT, care providers often tend to prioritize curative care (screening and treatment) over preventive care, which targets people who do not have active TB. Healthcare professionals also fear poor adherence to TPT by "healthy" patients, which could lead to the development of resistance to TB treatments if screening is not carried out effectively. Although they are unjustified, as the literature shows, these fears persist. Finally, the cost of prevention, in particular TB diagnostic tests (interferon gamma release assay - IGRA[8]) and preventive treatment, contributes to health professionals and program managers being hesitant about them, even though it is a cost-effective intervention. It is essential for projects to integrate approaches to involve and build the capacity of health professionals to overcome these barriers to implementing TB prevention.
2. Until recently, TPT has not received sufficient attention. Indeed, prior to 2017, **TPT indicators** were not included in the Global Fund's performance framework. TPT outcomes are still inconsistently and unreliably reported in WHO reports and by national programs. Increased focus on recording and analyzing TPT indicators is therefore needed, as well as analyzing the training needs of relevant staff.
3. It is difficult to calculate TPT coverage among contact TB cases due to **incomplete identification of contact cases**, especially during household surveys around an index TB case. This incomplete picture complicates registering people who are put on TPT, which is already difficult due to the lack of decentralized individual electronic registration on tablets (or equivalent) outside of DHIS2 Tracker health facilities.

8. IGRA: Interferon Gamma Release Assay.

4. **The need to rule out active TB diagnosis before starting TPT is an issue.** The variable patient screening algorithm and the related human and financial costs can be an obstacle. To facilitate the detection of asymptomatic TB, the triage algorithm should include chest x-rays as an initial systematic test in triage/screening for the prevention and screening in children and adults. For adult contacts of index TB cases, the use of IGRA tests or intradermal reaction (IDR) tests is also a triage issue when putting people on TPT, as it makes it possible to identify latent TB. However, these tests are more expensive and require two contacts in care, which represents a significant workload with caregivers travelling to patients' homes or travelling to health centers not covered for contacts of TB cases.
5. Finally, the **lack of awareness around the existence of TPT and its benefits among the population** means that people who could benefit from it do not know that they are eligible, so do not ask for it.

INCREASING TPT AMONG PLHIV - GOOD PRACTICE IN CAMBODIA

The OPTICAM research project set out to increase TPT coverage among PLHIV on antiretroviral therapy from 30% pre-intervention to 75% at the end of the intervention. The project directly initiated 1,500 additional PLHIV on TPT, compared to the pre-intervention phase, preventing the onset of TB disease as a result. The development of information, education and communication tools on TPT for PLHIV, which can also be used to promote TPT for family contacts of index cases, has been an effective and sustainable way of strengthening the capacity of PLHIV and care providers. It has also been possible to improve TPT knowledge among health professionals through training and regular monitoring and mentoring visits.

AREA 4

Recommendations from the cross-cutting evaluation

A co-creation workshop with leads of the evaluated projects, the L'Initiative team and Steering Committee led to the following recommendations being developed for future tuberculosis interventions:

Programmatic recommendations

→ **Involve the National Tuberculosis Control Program** (NTCP) in the implementing country as a key project partner to facilitate the transfer of activities, scale up or potential changes in standards at the end of the project. Operational research projects should prioritize research hypotheses that align with priorities set out in the TB National Strategic Plan.

→ Ensure that a **package of complementary activities** is planned that includes both prevention (including preventive treatment) and TB screening.

→ Analyze the **training needs of human resources for health,** around TB prevention in particular, develop training tools adapted to identified needs and monitor the trainings and the skills acquired.

→ Set out an effective approach and context-appropriate messages to promote demand for TB preventive treatment among eligible populations. Projects may plan to draw on **the social sciences** to help develop a complex message.

→ Strengthen the capacity of project leads and community partners around **epidemiological analysis** and **the national health information system.** This includes **training civil society actors** involved in the TB response on **TB-specific monitoring and evaluation,** to better understand, analyze and interpret epidemiological data (incidence, reporting rate by risk group, screening and prevention coverage, success rates, etc.). In particular, it is essential for actors to be able to analyze the early stages of screening and prevention.

→ Capacity strengthening may also be needed around understanding and using the national health information system (DHIS2 or any other national system in place).

→ If relevant, plan to **undertake a cost-effectiveness (or cost-benefit) analysis** of the intervention to demonstrate effectiveness in relation to the cost of the intervention. This can support **advocacy** around the results for future scale up of the intervention. Undertaking an analysis of this kind should therefore happen no later than the project mid-term to allow time for the lead and partners to carry out advocacy work.

→ Develop **innovative community outreach and mobilization approaches that specifically target men,** including in the workplace, and plan to conduct a gender analysis of results.

Technical recommendation

→ Include **chest x-rays as an initial, systematic test** in triage/screening for the prevention and screening of TB in children and adults, to identify asymptomatic TB and ensure early detection.

Conclusion

The majority of the projects evaluated demonstrate an effective response to the fight against tuberculosis, insofar as four of them have reached the targets set. The cross-cutting evaluation considers the results obtained conclusive in terms of screening and prevention, in particular through the identification of 1,826 TB cases and the administration of more than 3,500 additional or early TPTs, at a cost deemed efficient. The projects improved the additionality and timeliness of TB screening and improved TPT prevention, which has certainly had a significant, albeit unmeasured, impact on reducing TB incidence, transmission and mortality. The project interventions are all aligned with national priorities as well as Global Fund grants, and demonstrate a commitment to sustainability. Finally, all projects successfully strengthened the skills of health and community staff, supported by training tools adapted to pre-identified needs. These initiatives therefore provide a solid foundation for consolidating gains and scaling up TB efforts in implementing countries.

REFLECTIONS

In order to continue to support and boost TB research, L'Initiative organized a multidisciplinary masterclass in December 2023 bringing together 30 young researchers from 16 French-speaking African countries at the Centre Pasteur in Cameroon. This event enabled interdisciplinary discussions with experts with varied specialist backgrounds (biology, epidemiology, anthropology, economics, etc.). The objective was to structure the research, to fill gaps in specialist areas and promote an innovative approach integrating public health, diagnosis, prevention and co-infections. This initiative has helped build the capacity of researchers and accelerate the scientific breakthroughs needed to address the challenges of tuberculosis.

ACRONYMS AND ABBREVIATIONS

CHIAS	Community Health and Inclusion Association
CHW	Community Health Workers
CSO	Civil Society Organizations
IGRA	Interferon Gamma Release Assay
MdM	Médecins du Monde
NSP	National Strategic Plan
NTCP	National Tuberculosis Control Program
PLHIV	People living with HIV
TB	Tuberculosis
TPT	Tuberculosis Preventive Treatment
WHO	World Health Organization

This publication is part of a collection presenting the results from cross-cutting evaluations produced by L'Initiative. The following back issues are available on our website, in the "documentary resources" section, in both full and summary versions and in both French and in English:

This cross-cutting evaluation was carried out by Pierre-Yves NORVAL, Mathurin DEMEBELE and Christelle BOULANGER, and led by HMST between June 2023 and April 2024. It was coordinated by Elsa Goujon, Coordinator of L'Initiative's Evaluation Unit at Expertise France's Health Department.

The analysis and conclusions presented in this document are the responsibility of the authors. They do not necessarily reflect the official point of view of Expertise France or of the organizations and projects evaluated.

Written by: Isabelle Cartoux

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