



FINAL EVALUATION

EVALUATION OF APPROACHES TO IMPROVE SCREENING AND COMPREHENSIVE MANAGEMENT OF LATENT TB INFECTION IN CAMEROON AND MADAGASCAR (APRECIT)

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EVALUATION DATES: OCTOBER 2023 - JANUARY 2024



COUNTRY:
MADAGASCAR,
CAMEROON



BUDGET:
€1,148,101



LEAD ORGANIZATION:
Fondation Mérieux

PARTNERS:
Institut Pasteur de Madagascar (IPM),
Centre Pasteur du Cameroun (CPC)



START DATE:
01/2021

END DATE:
12/2023

THE PROJECT

Background

The WHO 2023 tuberculosis report shows a global tuberculosis (TB) incidence rate of 133 cases per 100,000 population, compared to 157 in Cameroon and 233 in Madagascar. Globally, only 16% of household contacts were put on preventive treatment (TPT), compared to 1.3% in Cameroon and 8.9% in Madagascar.

Latent TB infection (LTBI) represents a reservoir for active TB cases to continue to emerge.

The WHO “End TB” strategy recommends collaboration with civil society organizations and the scale up of research and innovation.

In both Madagascar and Cameroon, there are structured national TB control programs (NTCPs). Although community health workers (CHWs) are involved in supporting NTCPs, they are too few in number and are poorly supervised.

Project operating model

This is an operational research project led by Fondation Mérieux, which was established by CPC Cameroon and IPM Madagascar alongside the NTCPs and community-based organizations.

The project involved community health workers identifying 250 index cases of tuberculosis patients in each country and from these index cases recruiting 1,250 household contacts to be monitored for 24 months.

OBJECTIVES

Overall objective

Assess different approaches to improve screening and management of latent TB infection in Cameroon and Madagascar.

Specific objectives

- ▶ **OS1** : Assess screening and management of TB infections by community actors.
- ▶ **OS2** : Compare 2 TB infection screening tests (IGRA QFT-P and T-SPOT-TB tests with intradermal reaction [IDR] test) among TB index case contacts.
- ▶ **OS3** : Assess the prognostic value of 2 IGRA and Heparin-Binding Hemagglutinin Adhesin (HBHA) tests.
- ▶ **OS4** : Assess the cost-effectiveness of the use of IGRA and/or IDR for contacts of TB index cases.
- ▶ **OS5** : Develop a biobank of project participants to investigate new biomarkers of TB infection and TB progression.

EVALUATION RESULTS

Relevance

The project is very relevant. It aligns with the WHO “End TB” strategy as well as their 2020 consolidated TB guidelines. It also aligned with NTCP guidelines and community initiatives through the inclusion of partnerships with 10 facilities and establishing an innovative community model. Finally, the project aims to provide information to NTCPs to help them make strategic TB infection management decisions.

Effectiveness

The project’s level of effectiveness was deemed acceptable. The community model implemented was innovative. Research technicians and active case finding community officers (known as ACRA) identified and monitored household contact cases. In addition, the IGRA/IDR comparative study concluded that IGRA tests have good specificity and sensitivity.

However, the inclusion of cases and household contacts was not achieved and monitoring of contacts was considered insufficient. Data was not available on contacts < 5 years being put on TPT and TB cases among adult household contacts being put on treatment. Finally, an analysis of TB rates among adult household contacts was not carried out, despite this being the primary outcome of the study.

Efficiency

The level of efficiency was considered good. The initial budget was used to implement inclusion interventions, despite the increase in inclusion sites for household contacts. Budgets and timelines for disbursement of funds were also met.

However, the cost-effectiveness analysis of the project had not yet been carried out at the time of the final evaluation.

Impact

The level of impact was considered acceptable. The project demonstrated that screening for TB infection in adult household contacts is feasible and that detecting cases of active TB during monitoring of adult household contacts contributes to the reduction in time for these patients to be put on treatment, and in transmission and incidence. However, there was no analysis on the TB screening rate among adult household contacts. In addition, the comparison of IDR and IGRA tests did not demonstrate a clear impact on NTCP strategies. Finally, the objectives for using biobank samples were not clear.

Sustainability

The level of project sustainability is acceptable. The skills acquired by ACRA and laboratory technicians will be useful if NTCPs use these staff. In addition, the project instilled habits among family members to get tested if a TB case is identified within the household. However, the APRECIT project has not yet drafted a formal exit plan.



Conclusions and recommendations

This very relevant project demonstrated a good level of coherence and efficiency, and there was a good level of skills strengthening among the different project stakeholders. The effectiveness, impact and sustainability of the project were considered acceptable. Based on this analysis, the following recommendations have been made:

To CPC Cameroon and IPM Madagascar:

- ▶ Analyze TB incidence data in adult contacts.
- ▶ Analyze TPT coverage among household contacts under 5 years of age.
- ▶ Complete the cost-effectiveness study.
- ▶ Clarify the use of the biobank to investigate the prognostic value of TB infection, progression to TB disease and the effectiveness of antituberculosis treatment.

To CPC / the NTCP in Cameroon and IPM / the NTCP in Madagascar:

- ▶ Set up a working group to make better use of APRECIT project data and discuss options.
- ▶ TPT without tuberculin testing in high-risk groups, such as contacts of cases aged over 55 years and prisoners.
- ▶ TPT with IDR or IGRA tuberculin testing in lower risk groups, such as contacts of TB cases aged between 5 and 54.
- ▶ Switch to short-course TPTs (1HP or 3HP or 3RH), as recommended by WHO.

To L’Initiative:

- ▶ Monitor the technical outcomes of the project.

SEPTEMBER 2024