

THE ELIZABETH GLASER PEDIATRIC AIDS FOUNDATION CAMEROON, UNITAID CATALYZING PEDIATRIC TB INNOVATIONS (CAP TB) PROJECT FACT SHEET – END OF PROJECT UPDATE

CONTEXT

In Cameroon, about 6,000 children under the age of 15 years old develop TB each year. In 2017, the National Tuberculosis Program reported only about 22% of expected pediatric TB cases. This represented 5.5% of all the total TB cases, which was well below the minimum of 10% expected by the World Health Organization in a high TB prevalent country like Cameroon.

These gaps have not been addressed in the last few years, and in 2020, the number of children with TB notified to the national program represented 5-7% of the total TB cases. The country has adopted and introduced Xpert MTB/Rif as the initial test for TB diagnosis in children, as well as active case-finding strategies and new child-friendly treatments.

Yet still, there are barriers affecting case detection and notification leading to missing cases, as well as:

- Missed/poor diagnosis
- Low suspicion of TB in children by clinicians
- Difficulties to diagnose TB in children due to frequent intrathoracic localization of TB in children
- Difficulties to collect quality samples and weak sample transport systems to Xpert testing sites.

SCOPE OF THE UNITAID CAP TB PROJECT

Implemented in Cameroon, eight other sub-African countries, and India, the Unitaid-funded CaP TB Project ran for four years (October 2017 to September 2021). In Cameroon, the project was implemented in three regions (Center, Littoral, and West), across 27 Districts in 50 Health facilities.

The overall goal of the project was to reduce the morbidity and mortality caused by pediatric TB. Though CaP TB, EGPAF worked to provide better care for children with TB through the following objectives:

- Improve the regulatory and political environment in favor of pediatric TB.
- Increase the demand for anti-TB treatment through improved case detection.
- Increase the uptake and access to improved pediatric TB treatments for active and latent TB
- Generate novel evidence and data on cost-effectiveness
- Ensure an effective and sustainable transition from the project to the national program

The project was implemented through a hub-and-spoke model, with two key interventions: (1) integration of TB services in non-TB entry points such

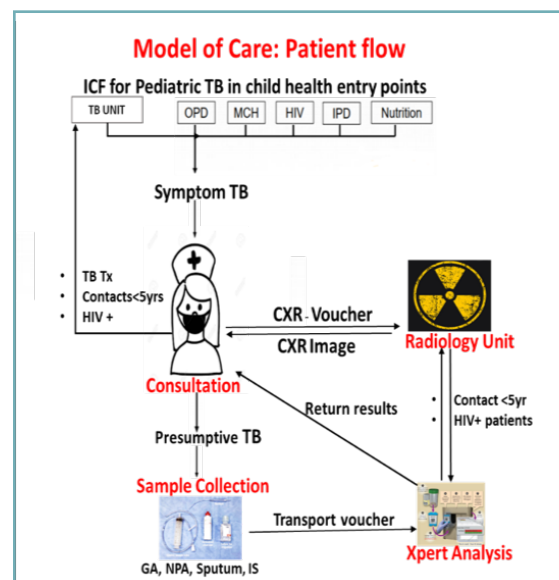
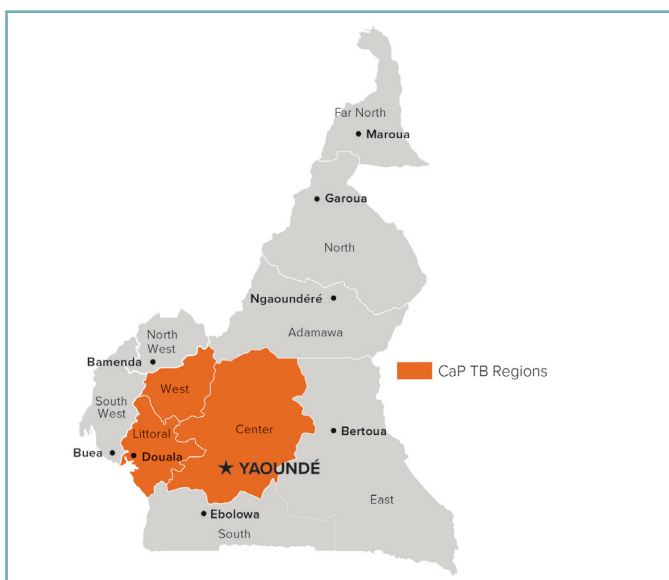


Figure 1. Left: Cameroon Map showing Region where CaP TB was implemented; Right: CaP TB Patient flow at facility level (Implementation model)

as outpatient department; CDT; UPEC/CTA; pediatric ward; and maternal, neonatal, and child health and (2) decentralization of TB services. The package of activities provided by the project was thus divided into site-level, regional/district-level, and central-level activities.

At the site level, activities implemented included: site assessment and upgrade, provision of job aids (SOPs, algorithms, guides), upgrading and maintenance of Gene Xpert platforms, and training health care workers (HCWs) on TB diagnostic and management and regular site monitoring and supervision. We also reviewed patient flow to optimize intensified case finding (initial screening) at various entry points, including key non-TB entry points as well as contact investigation (both at the facility and community levels), which was introduced only during the last few months. EGPAF also supported sample collection through the procurement of consumables for gastric aspiration, 26 nasopharyngeal hubs, and six devices for sputum induction in addition to training HCWs on sample collection procedures and providing transportation (to allow for Xpert testing), access to chest X-ray (subsidizing the costs of chest X-ray exams), piloting 3RH regimen for preventive TB treatment, and supporting the procurement of buffer stock both for TB treatment and preventive treatment.

- At the regional/district level, we supported monthly/quarterly supervision with district staff, regional review meetings, data validation meetings, joint supervision—including peer supervision.
- The project supported the update of national guidelines and programmatic tools, the introduction of innovative TB diagnosis and treatment interventions in the revised National TB guideline, joint strategic planning involving other stakeholders, program review meetings, coordination meetings and advocacy, joint supervision, validation of monitoring and evaluation tools, regular feedback, and sharing of project data to key stakeholders in the health sector.

PROJECT ACCOMPLISHMENTS

Below are key project achievements from January 2019 to September 2021:

SITE ENROLMENT

By the end of the project, 50 sites were part of the CaP TB project. These include five higher and 28 intermediate level facilities, as well as 17 primary health care facilities.

CAPACITY BUILDING AND MENTORSHIP

The project has conducted trainings in the following domains:

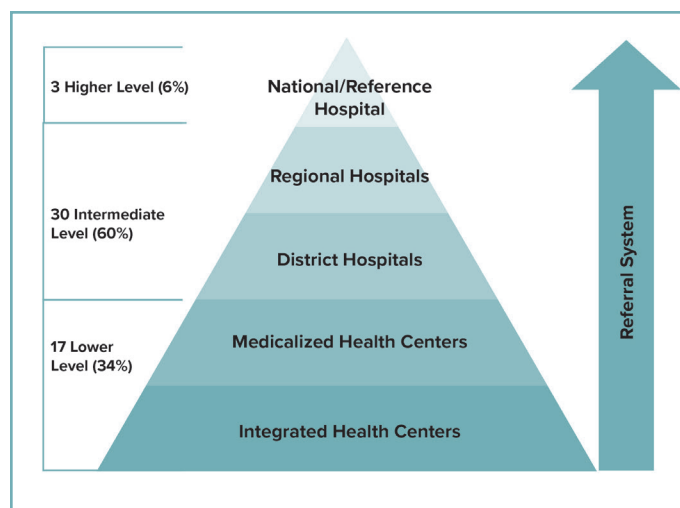


Figure 2. Decentralization of Pediatric TB services to Lower Level Facilities

- In total, we trained 68 trainers during three TOT sessions. These trainers came from all levels of the health pyramid and took part in onsite training, supervision, and mentorship/coaching at the site level.
- An estimated 1,400 health personnel have been trained in the area of pediatric TB management including screening, diagnostic, treatment (FL-FDC), sample collection procedures (GA, NPA, SI), preventive therapy and eligibility, as well as contact tracing, chest X-ray interpretation, filling of registers and forms, and stock monitoring.
- Over 54 community health workers were trained on household contact investigation and screening through the CAMNAFAW (CSO) sub-grants.
- About 2,000 Ministry of Health (MOH) staff of different cadres took part in entry point coordination meetings and supported project activities onsite.
- We conducted over 300 site-monitoring supervisions including data quality assessment visits, in collaboration with the MOH.

Indicator	Baseline	Intervention (CaP TB)	P. value
Bac. Confirmed TB 0-4yr): Average Monthly Rate	0.1	0.2	0.0316
TB Treatment Success Rate (%)	67.7	86.1	0.0063
PT Initiation: Average Monthly Rate	0.94	2.16	0.0732
Proportion PT Completion (%)	43.4	92.2	0.0004

Table 1. Improvement in Clinical outcomes compared to standard of care.

PROJECT RESULTS

Though we achieved above our targets in some indicators along the cascade of care, there were missed screening opportunities for children who attended various entry points.

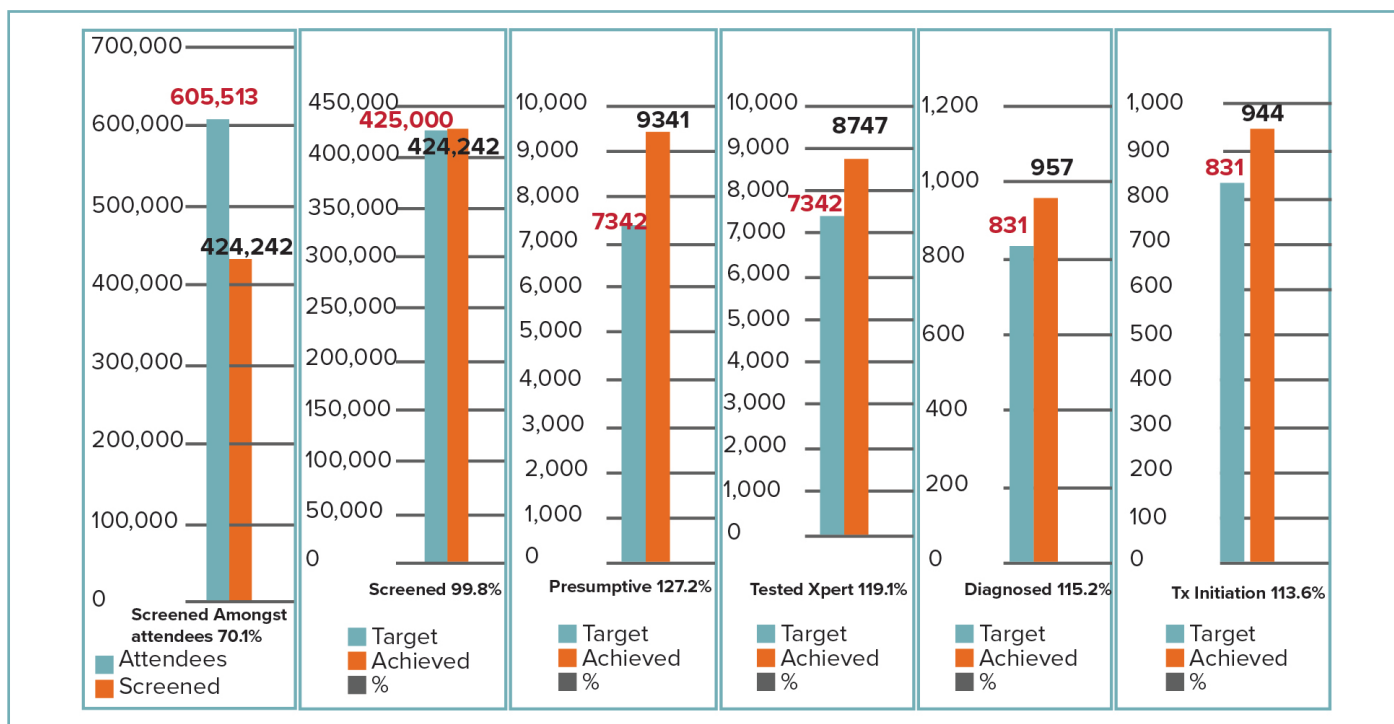


Figure 3. Cumulative Performance of CaP TB against Targets: Jan 2019 to Sep 2021

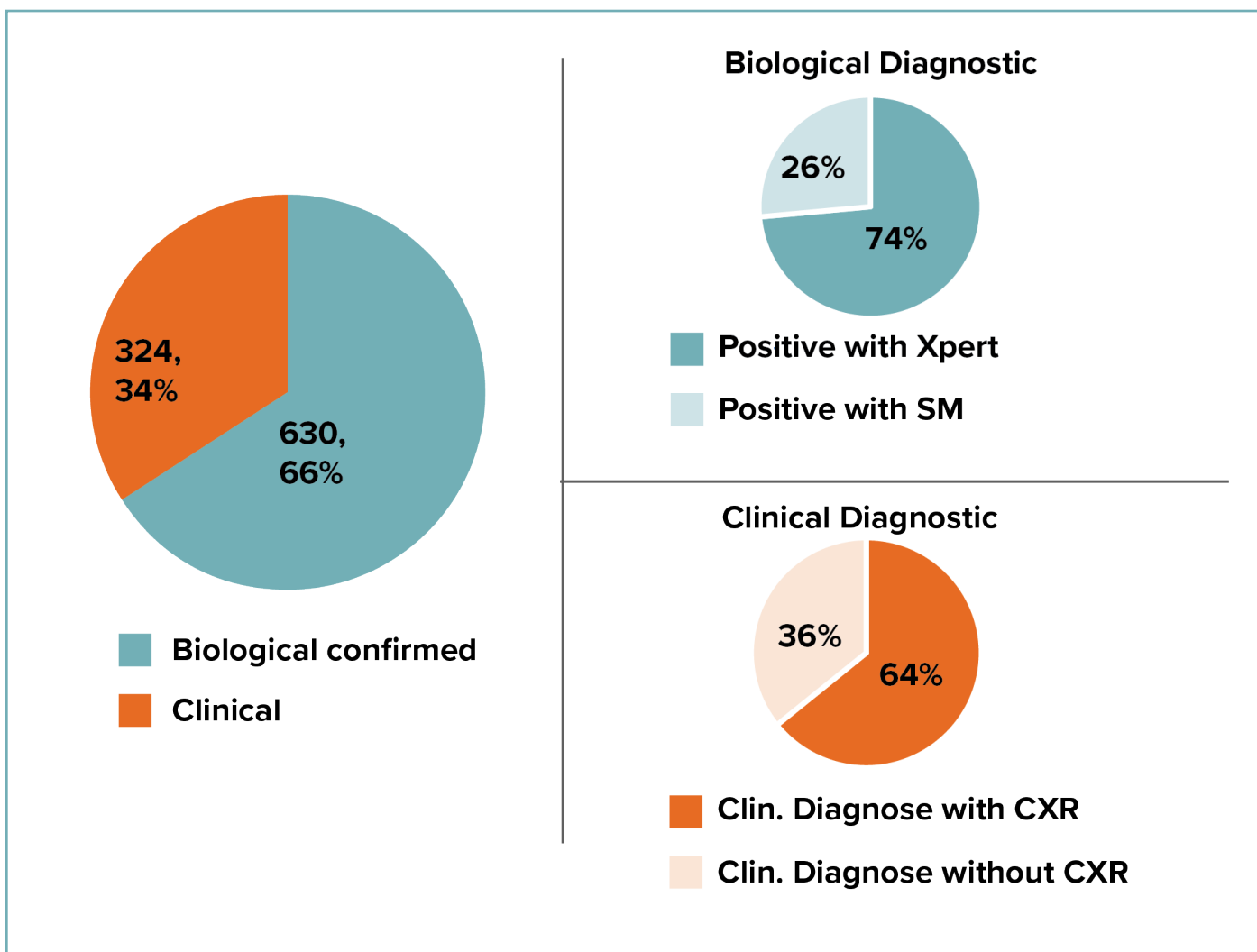
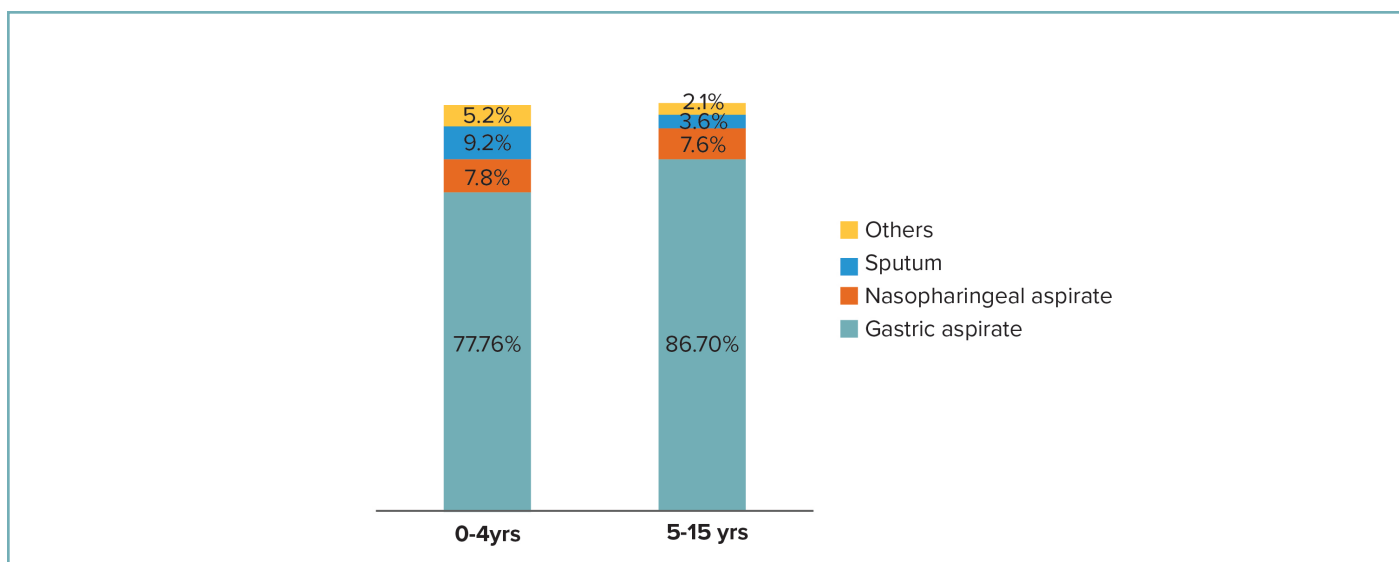


Figure 4. Method of TB Diagnosis in Children; Bacteriological vs Clinical Diagnosis



	Pre-intervention (14 sites)	Post-intervention (14 sites)	Fold Increase	P-value
Average # of month evaluated	12	17	N/A	N/A
Number of children 0-4 years with bact confirmed TB*	8	44	N/A	N/A
Average monthly rate of children 0-4 years with bact confirmed TB	0.05	0.18	3.6	0.02

Figure 5. Improvement in Bacteriological TB diagnosis in children 0-4yrs through High Yield Sample Collection Procedures

Entry Points	Screened	Presumptive for TB	Diagnosed TB	Number Needed To Screen
UPEC/CTA	11,192	856	103	109
Ped ward	58,601	2,769	274	214
CDT	4,769	1,888	84	57
OPD	113,011	3,484	484	233
MNCH	251,590	200	6	41,934

Table 2. Integrating Pediatric TB Services in Non TB Entry Points; Number Needed To Screen

KEY LESSONS LEARNED

- Integration of ICF in various entry points favored TB presumption, investigation, and case detection.
- Gastric aspirate improves bacteriologically confirmed TB in younger children (0-4 years) as it is instrument-free and has a lower complication.
- Chest X-rays significantly improve TB clinical diagnosis in presumptive patients with negative Xpert results (8514 Xpert Negative, 1968 Chest X-ray done, 405 suggestive of TB).
- Regular site support and close site monitoring are critical to ensuring effective implementation of the learning/training.