Nourish and Heal Project

Help a Tanzanian Child Fight TB and Malnutrition

Kicheko Africa Foundation 5/30/25 ceo@kichekoafrica.or.tz

1. Background and Rationale

Tuberculosis (TB) remains one of the leading infectious disease threats worldwide, and children are particularly vulnerable. It is a significant public health challenge, especially in underserved and rural communities where healthcare infrastructure is weak, and early detection is limited. The World Health Organization (2023) reports that Tanzania is among the 30 countries with the highest TB burden globally, with more than 90,000 new cases each year. An estimated 10% of these cases occur in children under the age of 15, many of whom remain undiagnosed or receive delayed treatment (Ministry of Health, 2022).

Malnutrition plays a critical role in TB outcomes, especially in pediatric patients. Undernourished children have weakened immune systems, which reduces their ability to fight TB infections and respond to treatment. At the same time, TB exacerbates malnutrition by increasing metabolic demands, suppressing appetite, and impairing nutrient absorption (Bhargava et al., 2013). This bidirectional relationship creates a vicious cycle that can lead to prolonged illness and higher mortality if not properly addressed.

In many Tanzanian households, poverty makes it nearly impossible to access adequate nutrition. Even when children receive TB medications through national programs, the absence of basic nutritional support significantly compromises their ability to heal. In addition, families face numerous obstacles such as transport costs to clinics, long distances to health centers, limited understanding of treatment regimens, and a lack of psychosocial support all contributing to poor adherence and increased treatment default rates (Stop TB Partnership, 2018).

The COVID-19 pandemic has compounded these issues, further weakened health systems and increased household food insecurity. As a result, health workers have observed a rise in cases of children with advanced TB and severe malnutrition, which further complicates recovery and increases the risk of death (UNICEF Tanzania, 2022).

The "Nourish and Heal" project addresses this urgent health crisis by targeting the dual burden of TB and malnutrition in children. Through an integrated approach combining medical treatment, nutritional support, caregiver education, and community-based follow-up, the project aims to dramatically improve health outcomes for at-risk children. Research has shown that combining TB therapy with nutritional care significantly reduces treatment failure and child mortality (WHO, 2013).

This intervention also supports Tanzania’s National Strategic Plan for TB and Leprosy, and contributes to global health goals such as the WHO End TB Strategy and Sustainable Development Goals (SDGs) related to child health, nutrition, and infectious disease control. By strengthening partnerships with local clinics and empowering caregivers, “Nourish and Heal” represents a scalable and impactful solution to a persistent child health emergency.

Specific Objectives

Objective 1: Provide targeted nutritional support to malnourished children undergoing TB treatment

The project will deliver consistent, high-quality nutritional supplementation to 5000 children receiving TB treatment in Dar es Salaam, Morogoro and Dodoma regions. Each child will receive a bi-weekly package containing high-protein porridge flour, fortified foods, and micronutrient powders tailored to their age and nutritional needs. The aim is to stabilize and improve the children's nutritional status, boost immunity, and support faster, more complete recovery. Nutrition will be integrated with medical follow-up and adjusted based on weight and clinical progress.

Objective 2: Ensure treatment adherence through health system navigation and family support

Access to free TB medication exists in Tanzania, but logistical and socio-economic challenges often prevent children from completing treatment. This project will deploy trained field staff to follow up on missed appointments. This will reduce treatment default rates and improve continuity of care for children with complex or prolonged recovery needs.

Objective 3: Train caregivers in TB management, child nutrition, and hygiene

The project will train at least 500 caregivers primarily mothers and guardians through structured workshops and printed health materials. Sessions will cover TB transmission and prevention, drug adherence, food preparation for malnourished children, infection control in the household, and recognizing danger signs. Empowered caregivers are critical to ensuring that children complete treatment and remain healthy after recovery.

Objective 4: Strengthen the capacity of community health workers to deliver integrated care

Twenty local community health workers (CHWs) will be trained and supported to provide home-based care and follow-up. CHWs will monitor children's progress, deliver nutrition packs to remote households, conduct home hygiene assessments, and refer complex cases back to clinics. They will serve as the bridge between health facilities and families, promoting accountability, continuity, and early intervention.

3. Key Activities

To achieve its objectives, the *Nourish and Heal* project will implement the following key activities, organized under each objective:

Objective 1: Nutritional Support for TB-Affected Children

i. Conduct beneficiries identification and enrollment
ii. Conduct initial nutritional assessments (height, weight, MUAC) of all enrolled children.
iii. Develop individualized nutrition plans in collaboration with clinical staff.
iv. Procure and distribute high-protein, micronutrient-enriched food supplements every two weeks.
v. Monitor weight gain and nutritional recovery monthly during treatment.

Objective 2: Support for Treatment Adherence

i. Provide monthly transport stipends or mobile outreach to reduce clinic visit barriers.
ii. Create a referral and appointment tracking system for TB-affected children.
iii. Follow up via home visits on missed doses or clinic appointments.
iv. Coordinate with local health facilities to streamline data sharing and patient tracking.

Objective 3: Caregiver Education

i. Develop culturally appropriate caregiver training materials (print + visual aids).
ii. Facilitate monthly community workshops on TB, nutrition, hygiene, and child care.
iii. Establish peer support groups for caregivers to share challenges and solutions.
iv. Distribute home-based care kits (soap, water treatment tablets, health calendars).

Objective 4: Community-Based Capacity Strengthening

i. Recruit and train 20 local community health workers in TB care and nutrition.
ii. Provide CHWs with bicycles, mobile phones, and field kits for household visits.
iii. Conduct monthly supervision meetings to assess progress and solve challenges.
iv. Implement feedback loops between CHWs and clinics for real-time patient monitoring.

4. Monitoring and Evaluation Framework

A robust Monitoring and Evaluation (M&E) system is central to the *Nourish and Heal* project, ensuring transparency, accountability, and evidence-based decision-making throughout implementation. The M&E plan will systematically track activities, outputs, and outcomes across all four project objectives, enabling the project team to assess progress, identify gaps, and adapt in real time.

Guiding Principles

i. Participatory and inclusive: Community health workers (CHWs), caregivers, and clinic staff will be actively involved in data collection and feedback loops.

ii. Integrated with existing systems: Where possible, project M&E will align with the National TB Program (NTLP) reporting tools and District Health Information System (DHIS2).

iii. Child-centered: All indicators and monitoring tools will prioritize child health and rights, with consent and confidentiality protocols in place.

Key Indicators by Objective

Objective	Indicator	Data Source	Frequency
1. Nutritional Support for TB-Affected Children	% of enrolled children with improved MUAC or weight-for-age z-score	Nutrition log, growth monitoring charts	Monthly
	# of children receiving full bi-weekly nutritional support packages	Distribution records	Bi-weekly
	% of eligible children enrolled in the nutrition program	Enrollment database	Monthly
2. TB Treatment Adherence	% of children completing TB treatment on schedule	Clinic TB registers	Quarterly
	% of follow-up visits completed within 72 hours of missed appointments	Visit tracking forms	Monthly

3. Caregiver Education	% of caregivers attending at least 4 training sessions	Attendance registers	Monthly
	% of caregivers demonstrating improved knowledge (pre/post-test)	Session assessments	Bi-annually
4. CHW Capacity and Community Linkages	# of home visits completed by CHWs per month	CHW logbooks	Monthly
	# of cases referred by CHWs to clinics	Referral forms	Monthly

Data Collection and Management

Data will be collected using standardized paper and digital tools (where feasible), and entered into a central database by the project's M&E team. Community health workers will be trained to collect reliable household-level data, including anthropometric measurements, treatment adherence records, and basic caregiver feedback. Quality assurance checks will be conducted regularly to ensure data integrity.

Analysis and Reporting

i. Monthly Review Meetings: The project team will meet monthly to review key indicators, identify implementation challenges, and make course corrections.

ii. Quarterly Progress Reports: Summarized progress reports will be shared with local government health offices and partners, incorporating both quantitative and qualitative data.

iii. Midline and Endline Evaluations: A formal midline assessment (Month 6) and endline evaluation (Month 12) will evaluate changes in nutritional status, treatment completion rates, caregiver knowledge, and CHW performance.

Use of M&E Data

i. **Learning and adaptation**: Results will inform real-time program adjustments, such as changing nutrition package contents or revising caregiver training approaches.

ii. **Advocacy and sustainability**: Success stories and outcome data will be packaged into briefs for policymakers and donors to advocate for scale-up and integration into existing health services.

iii. **Accountability**: Regular reporting to stakeholders, including caregivers and local health leaders, will ensure transparency and reinforce community trust.

Logical Framework Matrix

Project Strategy	Objectively Verifiable Indicators (OVIs)	Means of Verification	Assumptions
Goal: Reduce morbidity and mortality among malnourished children with TB in Tanzania	Decrease in under-five TB-related mortality in target area	National health and TB program statistics	Continued funding for TB and nutrition programs; political and health system stability
	Reduced rate of severe malnutrition among children with TB	Nutrition surveys	
		Hospital discharge data	
Outcome: Improved treatment success and nutritional recovery among enrolled children	≥90% treatment completion among enrolled children	Clinic TB registers	Caregivers adhere to follow-up visits; TB drugs remain available
	≥70% show weight gain or MUAC improvement within 12 weeks	Nutrition monitoring charts	
		Endline project evaluation	
Output 1: Nutritional support provided to children with TB	200 children enrolled and assessed	Enrollment forms	Food supply chain functions; children remain in care throughout treatment
	≥80% receive scheduled nutritional supplements	Nutrition distribution logs	
		Growth tracking sheets	
Output 2: Treatment adherence improved	≥90% of children complete TB medication regimen	Patient follow-up logs	CHWs can access homes; caregivers cooperate
	≥75% receive timely CHW follow-up	Referral system reports	

Output 3: Caregivers trained and empowered	≥500 caregivers attend at least 3 sessions	Training attendance sheets	Caregivers are available and receptive to training
	≥70% show knowledge gain on TB and nutrition	Pre/post-test results	
		Session evaluations	
Output 4: Community-based care capacity enhanced	20 CHWs trained and active	CHW field logs	CHWs remain active; supportive supervision continues
	≥75% of target households visited monthly	Supervision reports	
		Clinic referral tracking	

Theory of Change

Goal

To reduce TB-related child mortality and improve treatment outcomes among malnourished children in Dar es Salaam-Tanzania through integrated nutritional and community-based care.

Problem Statement

Malnourished children with tuberculosis are at significantly higher risk of treatment failure, prolonged illness, and death. Inadequate nutrition, limited access to follow-up care, and poor caregiver knowledge are key barriers to recovery.

Inputs

i. Funding and logistical support
ii. Nutritional supplements and therapeutic foods
iii. Educational materials and training curricula
iv. Human resources: health workers, CHWs, trainers
v. Partnerships with local clinics and health authorities

Activities

i. Screen and enroll 200 malnourished children with TB.
ii. Provide bi-weekly nutritional support tailored to children's clinical needs.

iii. Offer transportation stipends and CHW follow-ups to improve treatment adherence.

iv. Train 500 caregivers on TB management, hygiene, and nutrition.

v. Recruit and train 20 CHWs to provide home-based support and referrals.

Outputs

i. Children with TB receive regular, adequate nutrition.

ii. TB patients are supported to complete treatment on schedule.

iii. Caregivers are equipped with knowledge and tools to care for sick children.

iv. CHWs are active in the community, linking families to clinics and monitoring health.

Short-Term Outcomes

i. Improved nutritional status (weight gain, MUAC increase) in children.

ii. Increased adherence to TB treatment protocols.

iii. Enhanced caregiver knowledge and confidence in home care.

iv. Strengthened community referral and follow-up systems.

Intermediate Outcomes

i. Higher TB treatment completion and cure rates among malnourished children.

ii. Reduced risk of treatment default and post-treatment relapse.

iii. More resilient households and communities engaged in child health.

Long-Term Impact

i. Reduced mortality and morbidity due to TB in children under 15.

ii. Sustainable, community-based pediatric TB care model integrated into local health systems.

iii. Improved child survival and well-being in high-burden regions of Tanzania.

Assumptions

i. TB drugs and clinic services remain accessible and free of charge.

ii. Caregivers are willing and able to engage in educational and follow-up activities.

iii. Food supply chains are stable, and local health partners are cooperative.

iv. Political, economic, and environmental conditions remain conducive to service delivery.

Sustainability Strategy

The *Nourish and Heal* project is designed with long-term sustainability at its core. The strategy focuses on institutional integration, community ownership, capacity building, and linkages with existing government health systems.

1. Integration with Existing Health Systems

i. The project aligns with Tanzania's National TB and Leprosy Program (NTLP), and the nutritional interventions will be coordinated with the Ministry of Health's Integrated Management of Childhood Illness (IMCI) and nutrition strategies.

ii. Tools, data forms, and protocols used by the project will match those of the District Health Information System (DHIS2) to enable long-term data integration and use.

2. Capacity Building of Community Health Workers

i. By training 20 local CHWs and equipping them with knowledge and tools, the project builds local human resource capacity that remains after project close-out.

ii. CHWs will be integrated into existing village health teams and supervised by government health staff, enhancing institutional anchoring.

3. Empowering Caregivers and Communities

i. Caregiver education will not only support immediate health improvements but also build long-term health literacy and resilience.

ii. Peer support groups will continue beyond the project period with guidance from local clinics, creating a self-sustaining model of shared learning.

4. Local Ownership and Partnership

i. The project will collaborate closely with local government authorities, DTLCs, and health facility managers to ensure ownership and scalability.

ii. Final project learnings will be packaged into a policy brief to advocate for scale-up using district or donor funds through national programs like GFATM or UNICEF-supported grants.

5. Resource Mobilization

i. The project team will work with local authorities to identify funding streams, including integration into Comprehensive Council Health Plans (CCHPs).

ii. Cost-effective nutrition models and CHW-based care will be documented and shared with NGOs and donors for replication or co-financing.

Prisk Assumptions and Mitigation

Risk Category	Potential Risk	Likelihood	Impact	Mitigation Strategy
Operational	Delay or disruption in nutritional supplement procurement	Medium	High	Use pre-approved local suppliers; maintain 4-week buffer stock; stagger distributions
Health System	Stockouts of essential TB medications at health facilities	Medium	High	Coordinate monthly with NTLP/DTLCs; advocate through council health management teams
Community Engagement	Low caregiver participation due to stigma or competing priorities	Medium	Medium	Involve local leaders; use flexible session timings; provide transport or refreshments
Human Resources	High turnover or burnout among CHWs	Low	Medium	Offer regular supervision, refresher training, non-monetary incentives (e.g., certificates)
Funding	Delay in donor fund disbursement	Low	High	Maintain lean budget lines; prioritize core services; develop contingency implementation phases

M&E and Data Quality	Incomplete or inaccurate data from field workers	Low	Medium	Train CHWs on simple tools; conduct quarterly data reviews and feedback sessions

Total Budget: $222,943 | Duration: 12 Months

Category	Item Description	Quantity	Frequency	Unit	Unit Cost (USD)	Total (USD)
Direct Program Costs	Nutritional supplements for children	200	12 times	Child/Visit	22	52,800
	Transportation stipends	200	12 months	Family/Month	5	12,000
	Health supplies (MUAC tapes, scales, CHW kits)	20	One-time	Kit	330	6,600
	CHW visit stipend	20	12 months	CHW/Month	27.5	6,600
	CHW training (initial and refresher)	20	2 sessions	CHW/Session	137.5	5,500
	Caregiver education sessions	500	3 sessions	Caregiver/Session	5.9	8,850
	IEC materials (manuals, posters)	1,000	One-time	Copy	3.3	3,300
	Monitoring tools (tablets, forms)	5	One-time	Tablet/Set	880	4,400
	Beneficiary enrollment (registration, ID cards)	200	One-time	Child	5.5	1,100
Subtotal Program Direct Costs						**101,150**
Personnel	Project Coordinator (50% time)	1	12 months	Person/Month	1,320	15,840
	Nutritionist Consultant	1	6 months	Person/Month	550	3,300
	M&E Officer	1	12 months	Person/Month	1,100	13,200
	Field Officers	2	12 months	Person/Month	660	15,840

	Finance/Admin Assistant	1	12 months	Person/Month	770	9,240
Subtotal Personnel						**57,420**
Monitoring and Evaluation	Baseline and Endline assessments	2	One-time	Survey	3,300	6,600
	Midline learning workshop	1	One-time	Workshop	3,300	3,300
	Supervision visits	4	Quarterly	Visit	550	2,200
	Data system setup	1	One-time	System	2,200	2,200
Subtotal M&E						**14,300**
Operations and Logistics	Office rent and utilities	1	12 months	Office/Month	550	6,600
	Vehicle hire and transport	–	12 months	Monthly Hire	917	11,000
	Communications and airtime	–	12 months	Monthly	183	2,200
	Office supplies	–	Quarterly	Set	550	2,200
Subtotal Operations						**22,000**
Contingency	Emergency reserve	–	–	Lump Sum	–	**9,200**
Admin and Overhead	Indirect costs (finance, admin)	18%	–		–	**40,873**
GRAND TOTAL						**$222,943**