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A community worker providing health education at a village in Sidama region.
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TECHNICAL BRIEF

ENGAGING LOCAL ORGANIZATIONS TO IMPROVE COMMUNITY-BASED TB CARE IN ETHIOPIA

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BACKGROUND

The Ethiopian Health Extension Program (HEP) is a vital strategy for improving health at the community level. The program is beneficial for hard-to-reach communities because it addresses common health challenges by creating awareness and improving health-seeking behavior. The HEP is essential in addressing the issue of access to essential health services and in progressing toward universal health coverage (Wang, et al, 2016). Health extension workers (HEWs) are the functional units and implementers of the HEP (Assefa, et al, 2019).

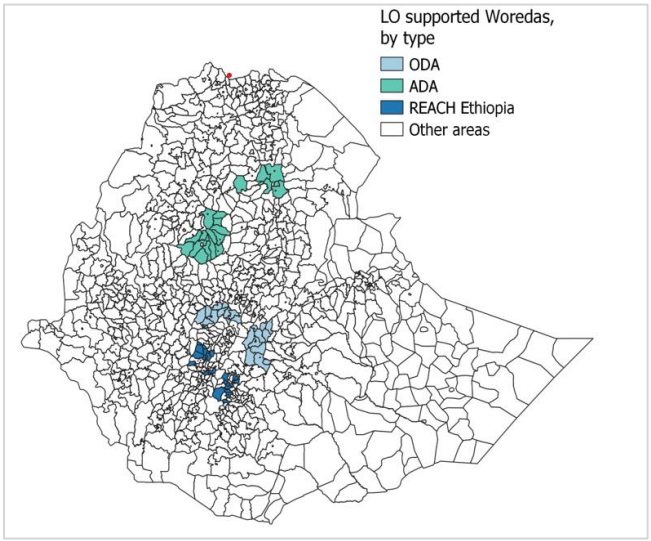
Community-based TB care (CTBC) is an important component of the HEP. CBTC mainly focuses on awareness creation about TB in a community, identification and referral of presumptive TB care to nearby health centers, referral of contacts of infectious TB cases, adherence to TB medication, and TB preventive therapy (TPT) (Datiko et al, 2017).

The proportion of TB cases referred by HEWs and diagnosed with TB—or community TB contribution—is a key indicator for monitoring CTBC activities (HMIS 2018). Community TB contribution has never reached 20% in Ethiopia (2018–2021, National Tuberculosis and Leprosy Program [NTLP] Reports) even though the target is 25–30%. Despite the strengthened HEP and the important role of HEWs in CTBC, the contribution toward TB case finding has fallen short of the expected targets.

With US Agency for International Development (USAID) funding, the USAID Eliminate TB Project designed a method for improving CTBC to ease the burden on overextended HEWs (who are responsible for 16 HEP packages) and to increase the support of local organizations (LOs) for CTBC. The project developed a plan to work with LOs that have long-standing experience in delivering health services at the community level, including Amhara Development Association (ADA), Oromia Development Association (ODA), and REACH Ethiopia (Renaissance through Research, Education & Advocacy for Comprehensive Health Service in Ethiopia).

ADA actively functions in 20 districts within Amhara region. To support CTBC, ADA has collaborated with the USAID Eliminate TB Project to operate in the East Gojjam and North Wollo zones of Amhara region. ODA covers 20 districts across the Arsi and South-West Shoa zones in Oromia. REACH Ethiopia is one of the few LOs in Ethiopia with significant experience with CTBC, and it operates in Sidama and Hadiya zones, covering 10 districts in each zone (figure 1).

Figure 1: Zones and districts supported by LOs for CTBC, December 2021

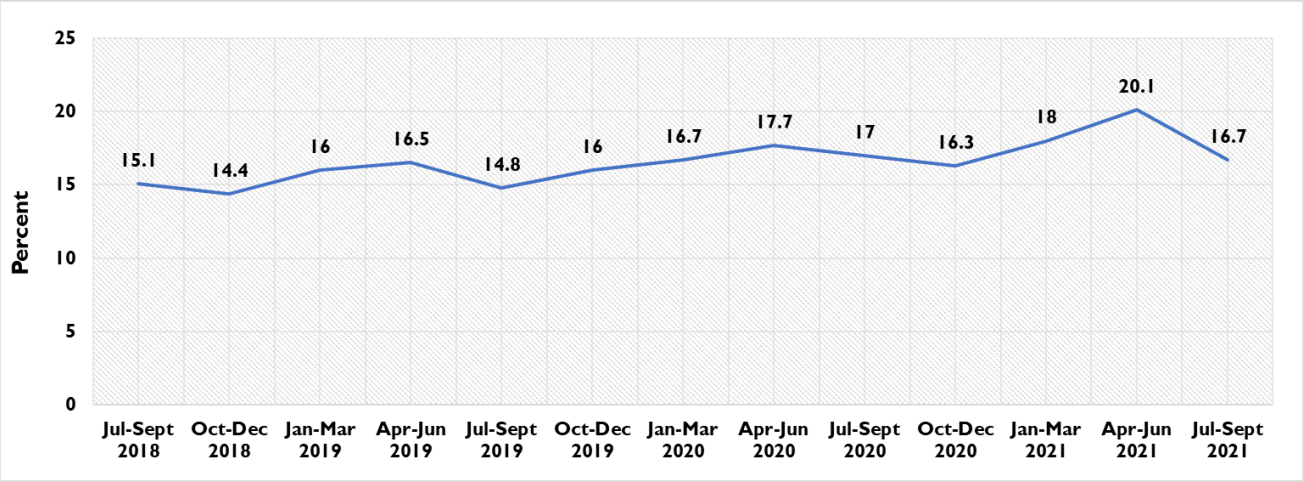


PROBLEM STATEMENT: IMPORTANCE OF ENGAGING LOS IN CTBC

Figure 2 shows the contribution of community TB activities decreasing or remaining steady instead of increasing as intended. Frequent national supervision showed a weak referral system between health facilities and the community.

The community level is where a lot of TB cases are missed and where HEWs are expected to be a key part of HEPs. However, HEWs are already overstretched with 16 packages of HEP to deliver, including CTBC. To address this, it is necessary to pursue other options to enhance CTBC.

Figure 2: Community-based TB contribution (%), July 2018–September 2021



Source: NTLP annual reports 2018–2021

Engaging LOs in CTBC has been identified as one option for addressing the low community TB contribution in Ethiopia. LOs have never been engaged to improve CTBC. LOs bring structure and volunteers at the community level who are part of the community, making them well-positioned to contribute to CTBC. To demonstrate the yield of enhanced community activities through the engagement of LOs and community members, the USAID Eliminate TB Project has been working with the three identified LOs since October 2020. These technical brief documents the impact of working with LOs, through their community members and volunteers, on CTBC.

PROFILE OF DISTRICTS SUPPORTED BY LOS ON CTBC

In the six zones where the LOs are functioning, there are 60 districts, 1,522 health posts, 3,100 HEWs, and 8,313 members of the Women Health Development Army (WHDA). Coordinated by HEWs, the WHDA is the functional unit for LOs that are actively participating in community TB activities. In all, the LOs serve a population of around 9 million (table 1).

Table 1: Profile of zones, woreda, health posts, HEWs, and WHDA by LO

LOs	# of zones	Population	# of woredas	# of health posts	# of HEWs	# of WHDA members
ODA	2	2,751,978	20	469	904	1,462
ADA	2	3,026,800	20	573	1,237	1,325
REACH Ethiopia	2	2,905,138	20	480	959	5,526
Total	6	8,683,916	60	1,522	3,100	8,313

STRATEGIC APPROACHES

HOW LOS ARE OPERATING

To improve CTBC, the LOs are operating from the community level to the regional level. At the community level, LOs engage the WHDA to mobilize communities, improve the quality of TB care, and ensure sustainability of TB services in Ethiopia. TB awareness creation, presumptive TB case identification and referral, and adherence to TB medication are implemented at the community level by LOs in collaboration with HEWs. Awareness creation by the WHDA addresses the active participation of women in CTBC. Health education at the community level also deals with stigma related to TB in the community. At health facilities, LOs are facilitating the evaluation of presumptive TB cases and the timely delivery of feedback. Between the community and the health facilities, they strengthen the referral of patients or specimens. At the district, zone, and regional levels, they organize training, supportive supervision, and review meetings. The planning, implementation, and monitoring of community TB services and targeted TB case finding among key and vulnerable populations for TB are coordinated at the district, zone, or regional level. In summary, the aim of working at the community level is to increase community TB contribution. The goal for LOs is to mobilize the community for TB; facilitate early referral to health facilities by the WHDA, HEWs, TB clubs, and community leaders; perform contact screening; track interrupters of TB medications and those lost to follow up; tailor TB screening for key populations, strengthen referral linkages; and provide timely feedback (figure 3).

Figure 3: Strategic approaches of the LOs

- **Awareness creation**: Health education using TB survivors (addressing gender and stigma)
- **House-to-house visits**: Identification of presumptive TB cases and contact tracing
- **Targeted TB screening**: At key populations (e.g., schools, prisons, internally displaced people, miners)
- **Facilitate the referral** of presumptive TB cases
- **Support adherence** of TPT and TB medications, including tracing and following up with patients lost to follow up/interrupters
- **Improving the data quality of CBTC** at health posts and the CTBC reporting system

- Facilitate, communicate, and follow the investigation of presumptive TB cases at health facilities
- Ensure that all presumptive TB patients access diagnostic services and treatment
- Contact tracing
- Follow up on timely feedback of referred presumptive TB cases

- Coordinate and facilitate the training of community workers and health care providers at health facilities and health centers
- Coordinate supportive supervision to health facilities and the community to evaluate CBTC
- Facilitate the conduct of CTBC review meetings

RESULTS

PRESUMPTIVE TB CASE IDENTIFICATION AND REFERRAL

Between April 2021 and March 2022, the three LOs reported the referral of 23,225 presumptive TB cases from the community to health facilities for evaluation for TB. Approximately 8% of the referred presumptive TB cases (1,866) were found to be TB cases (table 2). This is much higher than the less than 1% yield of TB cases that is usually reported (USAID Eliminate TB Project reports). This could be due to the targeted screening of probable TB cases in the community. Although there was variation among LOs, the numbers of presumptive TB cases referred and identified TB cases have been increasing.

Table 2: The yield of the community presumptive TB cases, April 2021–March 2022

Local organization	Indicators	April–June 2021	July–September 2021	October–December 2021	January–March 2022	April 2021–March 2022
REACH Ethiopia	# of presumptive TB cases referred to the PHCU	2,456	3,276	2,903	3,803	12,438
	# of TB cases detected from referred presumptive TB cases	234	439	423	391	1,487
	% of TB cases	9.5	13.4	14.6	10.3	12.0
ADA	# of presumptive TB cases referred to the PHCU	678	1,052	1,725	2,001	5,456
	# of TB cases detected from referred presumptive TB cases	15	33	42	33	123
	% of TB cases	2.2	3.1	2.4	1.6	2.3
ODA	# of presumptive TB cases referred to the PHCU	344	567	1,047	3,373	5,331
	# of TB cases detected from referred presumptive TB cases	23	48	72	113	256
	% of TB cases	0.7	0.8	6.9	3.4	4.8
Overall	# of presumptive TB cases referred to the PHCU	3,478	4,895	5,675	9,177	23,225
	# of TB cases detected from referred presumptive TB cases	272	520	537	537	1,866
	% of TB cases	7.8	10.6	9.5	5.9	8.0

PHCU = primary health care unit

RETROSPECTIVE CONTACT INVESTIGATION

Retrospective contact investigation is one TB case identification method applied by the LOs to identify TB cases among the contacts of pulmonary TB (PTB) treated in the last two years. Retrospective contact investigation activity was non-existent and was not planned in the supported districts prior to implementation by LOs. After implementation between April 2021 and March 2022, 34,323 contacts of 17,210 index cases were traced. Approximately 96.4% of these contacts were screened and 361 TB cases were identified, resulting in a TB case notification rate of 1,092 per 100,000 screened contacts.

This is about 1.5 times the notification rate of 768 per 100,000 screened contacts in the retrospective contact investigation in the routine program (Gashu et al, 2016). As the TB cases identified among contacts by LOs was declining, it showed the importance of applying retrospective contact investigation to clear the backlog of TB cases among contacts where ADA can also share the experience (table 3).

Table 3: Activities of retrospective contact tracing by LOs, April 2021–March 2022

Local organization	Indicators	April–June 2021	July–September 2021	October–December 2021	January–March 2022	April 2021–March 2022
REACH Ethiopia	# of index TB cases registered 1–2 years ago	7,133	14,266	476	54	21,929
	# of TB index cases around which contact tracing was performed	130	14,266	476	54	14,926
	# of contacts identified	7,548	17,813	996	249	26,606
	# of contacts screened for TB	6,896	17,813	996	249	25,954
	% screened	91.4	100.0	100	100	97.5
	# of contacts diagnosed with TB	109	169	8	6	292
	TB CNR/100,000 among screened contacts	1,581	949	803	2,410	1,125
ODA	# of index TB cases registered 1–2 years ago	1,233	1,107	2,649	2,214	7,203
	# of TB index cases around which contact tracing was performed	598	640	289	757	2,284
	# of contacts identified	1,789	1,879	1,354	2,695	7,717
	# of contacts screened for TB	1,650	1,784	1,150	2,534	7,118
	% screened	92.2	94.9	93.6	94.0	92.2
	# of contacts diagnosed with TB	13	26	11	19	69
	TB CNR/100,000 among screened contacts	788	1,457	957	750	969
Overall	# of index TB cases registered 1–2 years ago	8,366	15,373	3,125	2,268	29,132
	# of TB index cases around which contact tracing was performed	728	14,906	765	811	17,210
	# of contacts identified	9,337	19,692	2,350	2,944	34,323
	# of contacts screened for TB	8,546	19,597	2,146	2,783	33,072
	% screened	91.5	99.5	91.3	94.5	96.4
	# of contacts diagnosed with TB	122	195	19	25	361
	TB CNR/100,000 among screened contacts	1,428	995	885	898	1,092

PROVISION OF TPT

The provision of TPT through routine or prospective contact investigation is another LO activity, and 524 children were identified as eligible for TPT. There was an overall increase in community-based TPT coverage from 43% in April–June 2021 to 95% in January–March 2022.

The average TPT coverage was more than 80% from April 2021 to March 2022—one of the highest TPT coverage rates in Ethiopia. However, TPT coverage is much lower in the ODA-supported districts and needs to be improved (table 4).

Table 4: TPT coverage and adherence in LO-supported districts, April 2021–March 2022

Local organization	Indicators	April–June 2021	July–September 2021	October–December 2021	January–March 2022	April 2021–March 2022
REACH Ethiopia	# of children who are household contacts of cases with PTB index cases and eligible for TPT (0–14yrs)	1,239	2,782	345	916	5,282
	# of eligible children put on TPT (0–14yrs)	541	2,739	256	889	4,425
	% TPT coverage	43.7	98.5	74.2	97.1	83.8
ADA	# of children who are household contacts of cases with PTB index cases and eligible for TPT (0–14yrs)	0	13	61	81	155
	# of eligible children put on TPT (0–14yrs)	0	6	54	71	131
	% TPT coverage		46.2	88.5	87.7	84.5
ODA	# of children who are household contacts of cases with PTB index cases and eligible for TPT (0–14yrs)	160	406	232	232	1,030
	# of eligible children put on TPT (0–14yrs)	65	189	207	207	668
	% TPT coverage	40.6	46.6	89.2	89.2	64.9
Overall	# of children who are household contacts of cases with PTB index cases and eligible for TPT (0–14yrs)	1,399	3,201	638	1,229	6,467
	# of eligible children put on TPT (0–14yrs)	606	2,934	517	1,167	5,224
	% TPT coverage	43.3	91.7	81.0	95.0	80.8

CONTRIBUTION OF COMMUNITY TB CARE

The contribution of CTBC to overall TB notification increased from 9.6% in July–September 2020 to 24% in October–December 2021. Compared to the nearby zones and districts, the community contribution has been consistently higher in LO-supported districts each quarter after July–September 2019 (figure 5). This demonstrates that LO support has enabled actors to work in community TB contribution and adherence support.

TB CASES AND TREATMENT SUCCESS RATE

A total of 7,942 TB patients were diagnosed and treated between July 2020 and December 2021 in the districts supported by LOs. The trend of TB cases notification has shown continuous improvement except in the October–December 2021 period, when North Wollo was affected by conflict. The treatment success rate has also been maintained at 95% or higher in the LO-supported districts (figure 6).

Figure 5: Community contribution comparison of districts supported by LOs versus nearby districts, July 2020–December 2021

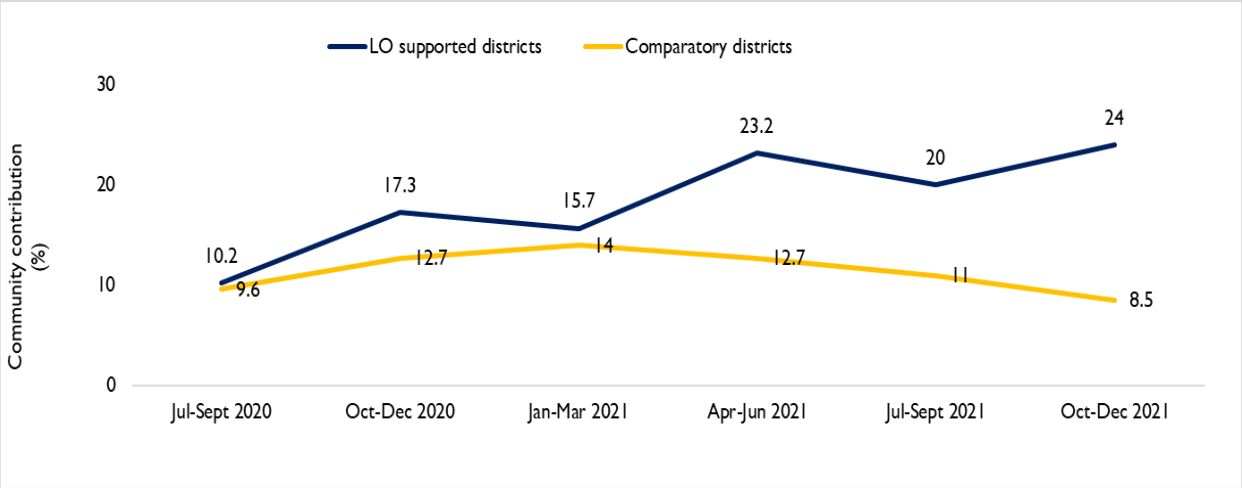
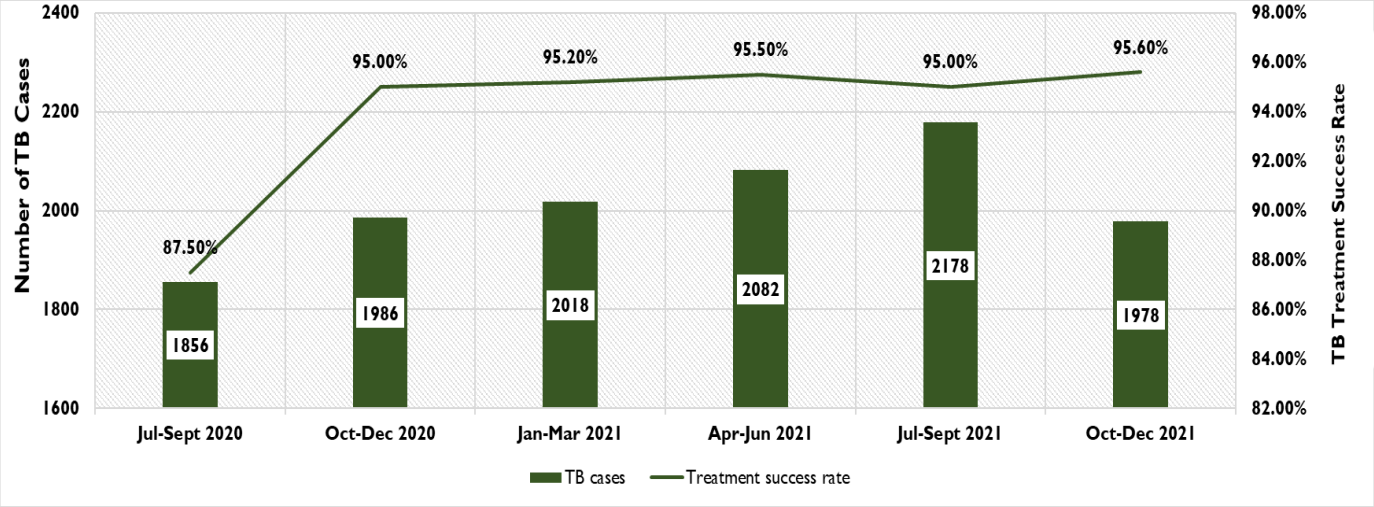


Figure 6: Trend in TB cases and TB treatment success rate in LO-supported districts, July 2020–December 2021



LESSONS LEARNED AND WAY FORWARD

As demonstrated by these results, LOs are well structured to respond to the local context. The involvement of these organizations in CTBC has resulted in better presumptive TB referrals, community TB contribution, contact investigation, and TPT than when CTBC is left to HEWs alone. The results demonstrate improvement in case finding or community TB contribution, treatment outcomes, contact investigation, and TPT coverage relative to comparison districts and national figures. Engaging LOs seems effective and efficient. It helps sustain CTBC as the community workers who participate are part of TB care.

Despite these promising results, there was some variation in the performance of LOs toward CTBC. Hence, the USAID Eliminate TB Project may build the capacity of experts working for LOs on CTBC. The project should continue to emphasize and support the capacity building of LOs and scale their best experiences to other zones and regions. The cost-effectiveness of the interventions could also be evaluated and improve.

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