TECHNICAL HIGHLIGHT

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Redefining the primary health care unit through private sector collaboration in Ethiopia

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BACKGROUND

Ethiopia is one of the low-income economies working to ensure access to primary health care (PHC) services for its population. Over the last decade, the health system has undergone rapid expansion, decentralization, and policy changes across the nation and its communities. The main focus is now on optimizing the capacity of the PHC unit, composed of a health center and its satellite health posts. However, there are also services, such as monitoring and evaluation activities (report narration and analysis), that go beyond the PHC unit to the woreda (district). Hence, capacitating and optimizing woreda-level services is vital to making PHC units completely functional and capable of delivering health services to rural communities.

Ethiopia is among high tuberculosis (TB)-burden countries with an estimated incidence of 164 per 100,000 population.[1] TB services are decentralized to deliver care to rural communities. However, there are fragmentations in the level of services. Despite gaps in national data availability, some district-level public facilities reportedly provide microscopy services, Xpert testing, and chest X-rays (CXRs). Pathological tests are done typically at tertiary-level hospitals. Although some private hospitals are engaged in TB care, functional networking between the public and low/middle-level private clinics often did not ensure proper specimen sampling and patient referral and feedback. Additionally, low- and middle-level private clinics did not deliver TB services to their catchment population, and health care workers (HCWs) lacked training in TB care.

According to WHO estimates, Ethiopia missed a third of its estimated cases despite decentralization of TB services to the community, including expansion of laboratory services.[1] Of the services expanded, the National TB Program (NTP) established a sample referral network to improve TB case finding, mainly among public health facilities and high-level private facilities. With this limited engagement of private clinics, only about 20% of cases in the country are notified; the percentage varies regionally, depending on the magnitude of the private sector and their engagement in TB prevention and control. However, lower private clinics have not been part of TB services.

Amhara is one of the most populous regions of the country. The Central Statistics Agency's projected population as of 2017 is 21,134,988. Amhara region has 915 public and 1,055 private health facilities. At public health facilities, 59 provide CXRs, 54 provide Xpert testing, 4 render pathological evaluation, and 611 conduct microscopy examinations. In 2017, one-third of the estimated cases were missed by the NTP; of those, approximately 17,000 were missed from this region that has more than 1,000 private clinics. An important contributing factor is that only 7.5% of private clinics in the region were engaged in TB care, even though these clinics were believed to be the primary entry point for people seeking care.[2] As in other regions across Ethiopia, optimal laboratory networking between public and low/middle-level private clinics is uneven.

Amhara Regional Health Bureau
Stop TB Partnership TB REACH
hosted by UNOPS
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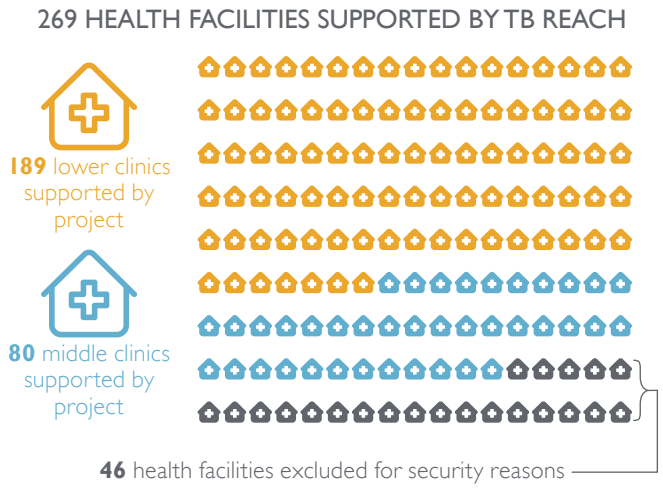
To address this challenge, it was critical to engage low- and middle-level private clinics in TB services, including screening of presumptive cases for TB, linking them to networked public diagnostic units, such as Xpert testing, fine-needle aspiration cytology (FNAC) evaluation, and CXR examination, and ensuring treatment initiation and follow-up.

Management Sciences for Health (MSH) implemented the TB REACH demonstration project in Ethiopia. TB REACH was initially limited to lower clinics, which represent over 70% of the total health facilities across the Ethiopian health system. During the implementation period 80 lower clinics were designated middle clinics and continued to receive support from TB REACH. The new middle clinics represent 42.5% of all middle clinics. The remaining clinics, representing less than 12% of the Ethiopian health system include specialty clinics and centers; laboratories; and general, primary, and teaching hospitals, which were not support in this phase of implementation. Figure 1 shows that TB REACH support was provided to 269 of the 315 target health facilities; the discrepancy included 46 facilities that were excluded for security reasons.

Figure 1. Private- and project-supported health facilities in Amhara



STRATEGIC RESPONSE AND IMPLEMENTATION

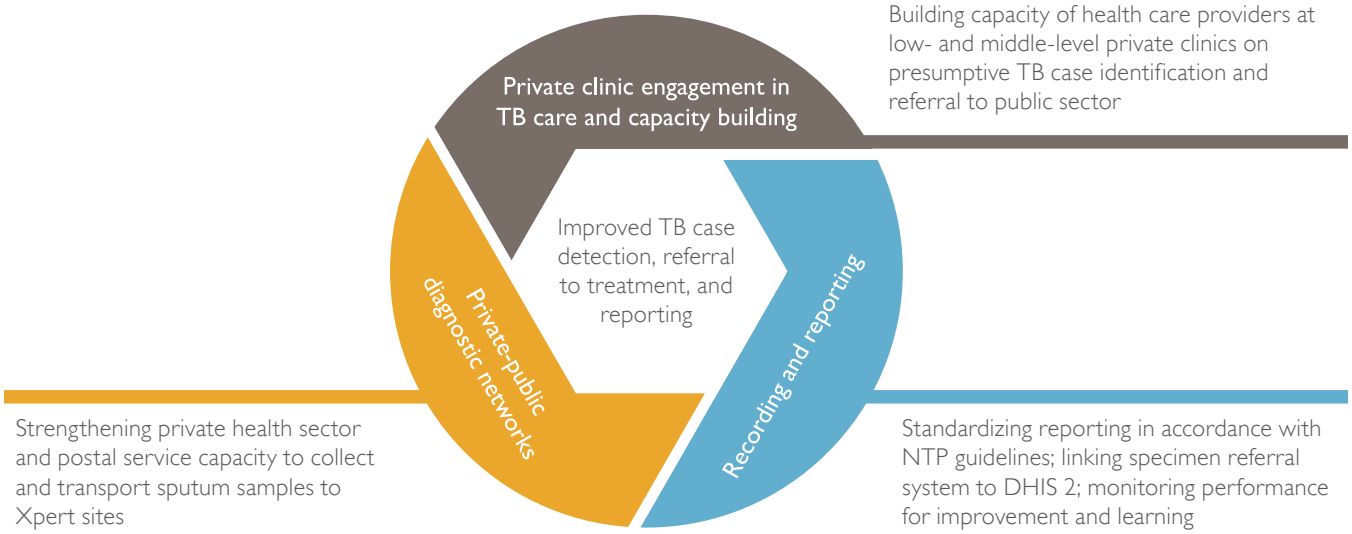
In consultation with the regional health bureau (RHB), the TB REACH demonstration project designed interventions that targeted low-level private clinics delivering TB services in the region. Figure 2 shows the strategic response to improving TB case detection, referral to treatment, and reporting.

The following activities were carried out as part of the TB REACH demonstration project.

Consultative meeting: In collaboration with the RHB, MSH conducted a series of stakeholder consultations to identify existing facilities and gaps in services, design operational solutions, and build the capacity of policy makers and HCWs in public and private health facilities. Some of the gaps identified during the meeting included client registration and follow-up books, job aids, Xpert testing, referral systems, and supplies.

Mapping of low- and middle-level private clinic and public diagnostic facilities: The list of functional, private low- and middle-level clinics and public facilities that provide Xpert testing, CXRs, and FNAC evaluation was obtained from the RHB. Baseline assessment on service provision, proximity, and optimum functionality of public diagnostic centers and

Figure 2. TB REACH strategic response



availability of the nearby postal service was conducted. Overall, 20 functional Xpert testing, 20 CXR, 3 pathology evaluation, and 48 postal service provision sites were identified during this mapping exercise.

Establish public-private diagnostic networking: In consultation with the RHB, TB REACH established referral and diagnostic networks for patient and sample referrals. Based on the proximity to nearby public or private diagnostic facilities and the availability of equipment (such as refrigerators), laboratory professionals, and the postal service, public and private facilities were linked together to function as a unit to deliver TB services.

Capacity-building endeavors: HCWs from low- and middle-level clinics were trained in basic TB care and TB program implementation. Postal service specimen couriers and public facility, Xpert, CXR, and pathology service providers were sensitized on the aims of the demonstration project.

KEY ACHIEVEMENTS

- By September 2019, 269 HCWs from project-supported private clinics were trained and/or sensitized on project implementation strategies and TB program updates. Similarly, 48 postal officers were sensitized on transporting sputum samples from project-supported private clinics to Xpert *Mycobacterium tuberculosis* and resistance to rifampicin (MTB/RIF) testing labs and returning test results to referring clinics.

- In terms of networking and diagnostic referrals for examination, 269 low- and middle-level clinics were networked to 20 Xpert testing labs, 20 CXR sites, and 3 pathology service providers.

Postal service staff picking up sample from a private clinic to be delivered to an Xpert testing site. (Photo credit: MSH Ethiopia)

- From December 2018 to September 2019, 261,071 patients visited the 269 project-supported private clinics, in which 234,963 (90%) were screened for TB and 3,350 presumptive TB cases were identified (1.4%). Among the 3,350 presumptive TB patients, 3,346 (99.9%) underwent testing or evaluation for TB (acid-fast bacilli [AFB] microscopy [*n* = 410], GeneXpert [*n* = 2,278], CXR [*n* = 437], and FNAC [*n* = 221]).

- A total of 359 TB cases were detected from December 2018 to September 2019. All detected TB cases commenced directly observed treatment, short-course (DOTS), and follow-up at nearby public health facilities.

- Table 1 indicates trends of successful referral for Xpert MTB/RIF testing and CXR and FNA evaluation among eligible presumptive TB patients from project-supported private clinics from December 2018 to September 2019. In that same period, 359 all-forms-of-TB cases were diagnosed from project-supported private clinics and all of them were started on TB treatment; 3 of the 359 TB cases were found to be rifampicin-resistant and were successfully linked to a nearby treatment initiating center.

Table 1. Variables for successful referrals, December 2018 to September 2019[i]

VARIABLES	#	%
Successful referral for GeneXpert MTB/RIF test and yield of testing		
Sputum sample collected	2,278	–
Sputum samples successfully transported to GeneXpert MTB/RIF testing sites	2,278	100%
Sputum samples successfully tested by GeneXpert MTB/RIF assay	2,276	99.9%
MTB+ cases detected	106	4.6%
Successful referral for chest X-ray examination and yield of examination		
Presumptive TB cases without productive cough	469	–
Presumptive TB cases referred for CXR examination	437	93%
Presumptive TB cases that underwent CXR examination	437	100%
CXR reading suggestive of TB	141	32%
Successful referral for FNAC examination and yield of examination		
Presumptive TB cases with lymphadenopathy	225	–
Presumptive TB cases referred for FNAC examination	221	–
Presumptive TB cases that underwent FNAC examination	218	98.6%
FNAC-based diagnosed TB cases	112	51.4%
TOTALS		
All forms of TB cases detected	359	–
TB cases started on treatment (at public DOTS centers that also do follow-up)	359	100%

[i] Table 1 shows referrals only and not AFBs conducted within private clinics. Although 401 AFBs were completed, no case was detected and are therefore excluded from the table.

AUTHORS

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The proportion of successful referral for GeneXpert MTB/RIF testing and CXR and FNAC evaluation has improved among eligible presumptive TB patients identified within project-supported private clinics.

GeneXpert testing at public facilities is free of charge, and TB REACH reimburses or covers service costs for CXR and FNAC evaluation in accordance with the agreement between TB REACH and public service providers. There is a plan to provide desktop computers to the 10 best performing private clinics to facilitate proper documentation.

WAY FORWARD

TB REACH demonstrated the feasibility of networking across public facilities, private facilities, and the postal service to facilitate effective patient and sample referrals, including transportation of samples. Additionally, the project demonstrated how a strategic investment in TB care at low- and middle-level private clinics delivered results in a relatively short implementation period. The RHB, zonal, woreda, and PHC units are actively engaged in this endeavor via joint supportive supervision and one-to-one mentoring, which grants sustainability beyond the lifetime of the project. Continued monitoring and identification of lessons learned will inform future technical documentation efforts.

REFERENCES

1. Global Tuberculosis Report 2019. Geneva: World Health Organization; 2019.
2. World Health Organization in Ethiopia. Annual report; 2017. Available at www.moh.gov.et.