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TECHNICAL BRIEF

PROGRESS OF TUBERCULOSIS (TB) PROGRAM AMONG THE KEY POPULATIONS IN ETHIOPIA: CONTRIBUTION OF USAID MECHANISMS

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BACKGROUND

The key populations for tuberculosis (TB) are the groups of people who are the most vulnerable, underserved, and at-risk for TB infection and illness. Substantial risk of acquiring TB infection could be due to living in a congregate setting or living in proximity to infectious TB cases (Stop TB field guide, 2018). Another key population is those at higher risk due to other comorbid illnesses such as malnutrition, renal failure, HIV, or poorly controlled diabetes mellitus. Children are a key population due to immature immune status, and older people are a key population because of their older immune systems. Key populations for TB also include those in areas where TB transmission or a high incidence of TB is evident, and tailored TB case finding and prevention intervention are needed to reduce TB incidence among the general population (Stop TB Partnership, 2015).

PROBLEM STATEMENT

Ethiopia developed a national TB [framework document](#) in 2018 to address TB among these key populations (MOH, 2018). It uses the 90-90-90 global targets for TB; the first 90 target (to access 90% of those with TB and start treatment) and the third 90 target (to successfully treat 90% of the TB cases among the key populations) are well-captured and monitored (Stop TB Partnership, 2015). However, the second 90 target (reach 90% of the key populations) has not been estimated.

With support from the various USAID mechanisms, much has been achieved in addressing TB among the key populations in Ethiopia. These USAID mechanisms, such as HEAL TB (2011-2016), TB CARE-I (2012-2016), Challenge TB (2015-2019), and the USAID Eliminate TB Project (2020-2025) have played and continue to play an important role in initiating TB service among the key populations and generating local evidence that contributes to national policy changes. The purpose of this brief is to document these achievements for the purposes of learning, adaptation, and sharing of best practices and lessons learned.

TB SERVICE APPROACHES FOR KEY POPULATIONS: KEY INTERVENTIONS

USAID mechanisms targeted key populations in Ethiopia since 2015 to improve TB service with the following interventions:

I. MAPPING AND PRIORITIZATION OF KEY POPULATIONS

Based on global selection criteria, national TB program of Ethiopia selected and mapped key populations based on their increased risk of exposure to infectious TB cases (contacts, migrants and refugees, prison inmates, urban slums, health care workers [HCWs]), increased biological or behavioral risk for TB disease (tobacco or drug users, children, people living with HIV [PLHIV], malnutrition, chronic renal diseases, old age), and limited or no access to quality TB services (urban poor, homeless). A prioritization exercise of key populations was conducted regionally to ensure cost-effectiveness by using the number needed to screen (NNS) to identify one TB case as a criterion.

2. ENHANCED TB SCREENING AMONG KEY POPULATIONS

Prior to TB screening, trained clinicians or community workers oriented the key populations on TB disease, means of transmission, and the importance of regular TB screening. This approach has been applicable in the mining setting, correction facilities for the inmates, and with the homeless. In addition, health education was conducted to avert the stigma and gender-associated barriers and encourage the key populations to be screened for TB and improve their access to TB treatment (Stop TB Partnership, 2018).



Photo credit: Oromia Guji zone team

3. INTEGRATED AND REDEFINED PRIMARY HEALTH CARE UNIT (PHCU)-BASED SUPPORT

The structure of the PHCU in Ethiopia consists of a health center or a primary hospital and satellite health posts. This structure excludes organizations with key populations such as prisons and missionary residents (Alebachew and Waddington, 2015). In 2020, the USAID Eliminate TB Project redefined the PHCU to include these priority populations during training, mentoring, and supportive supervision. Now, there is an integrated screening of key populations both at public health facilities and at other institutions with key populations.

4. MASS OR CAMPAIGN-BASED TB SCREENING

Mass screening is a campaign-based TB screening in the form of outreach. Trained clinicians and community workers approached and screened key populations including internally displaced people (IDPs), homeless people, miners, and contacts of TB cases (identified through retrospective contact tracing).

5. TREATMENT LINKAGE AND ADHERENCE

A barrier to accessing and adhering to TB treatment is a lack of follow-up, resulting from a limited or weak referral linkage between key populations and their institutions and centers with TB services. This could be due to the poor quality of TB services, absence of treatment when it is sought, or national policy issues. Securing TB medication after diagnosis is essential. TB cases identified in the key populations were linked to care and obtained a sufficient adherence service at the clinics of prisons, schools, etc., or through a regular referral to the nearby DOT services.

6. MONITORING AND EVALUATION OF THE KEY POPULATIONS

The estimates of the number of key populations, TB screening, clinical or laboratory evaluation or testing for TB, and linkage to TB treatment for the key populations were registered and reported. This monitoring has not been standardized, so there have been different registration and reporting forms used for different key populations. There was a separate reporting system for key population activity, other than the routine TB program reporting system, until the national health indicators were revised in 2021. Prior to 2021, the health management information system (HMIS) captured data only on TB among people with HIV, children, and the elderly. There was registration and

reporting tools used by the USAID mechanisms to capture and report other key populations were developed and field tested. Collaborating with the national TB program, the USAID mechanisms advocated during workshops and review meetings to include the indicators addressing other key populations, other than children and TB/HIV, used in their projects since 2013. These key population indicators have now been adapted within the national HMIS reporting formats. The other key populations addressed in the indicator revision were prisons, homeless people, miners, students, refugees, etc.

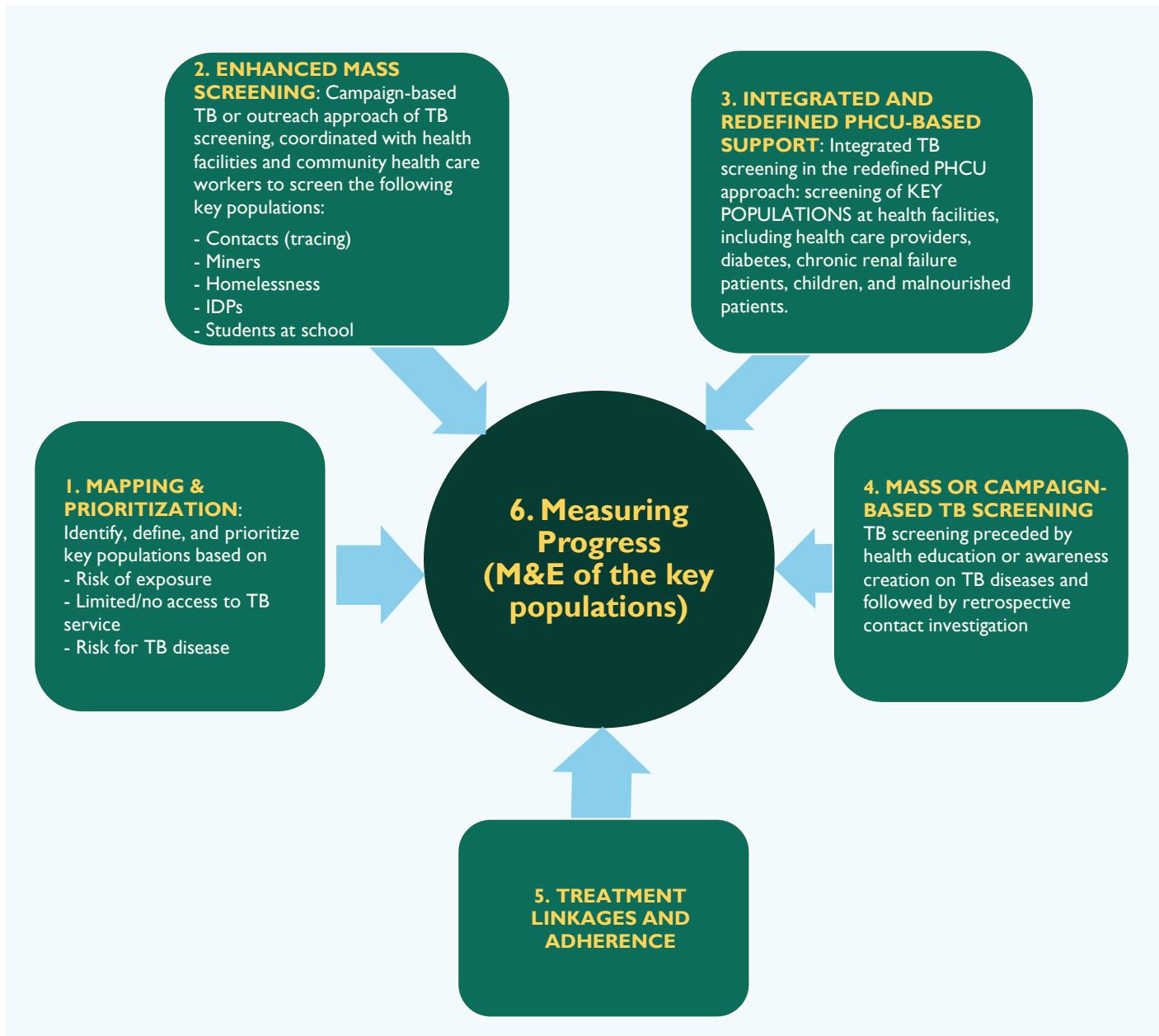


Figure 2: Approaches of TB service for key populations: important interventions

ACHIEVEMENTS AND FINDINGS

Different USAID mechanisms have played an essential role in the progress of addressing the needs of the key populations for TB and their inclusion in the national strategic plan.

USAID/HEAL TB STARTED TAILORED TB CASE FINDING AMONG KEY POPULATION

The HEAL TB project (2011-2016) initiated a tailored TB case finding approach among contacts of TB patients, prison inmates, workers in development farms, and miners in Oromia and Amhara regions. The prevalence of TB among the contacts, miners, and farm workers were 768, 1566, and 82, respectively, per 100,000 of screened population (MSH, 2016, End project HEAL TB report). The project also showed that the yield of TB among contacts of the prospective contact tracing was ten times higher than the national TB prevalence during the same period (Jerene et al, 2015), and the TB case notification rate (CNR) was six times higher among contacts of retrospective contact tracing in the study zones (Gashu et al, 2016).

USAID/CHALLENGE TB (CTB) SUPPORTED THE MAPPING OF KEY POPULATIONS AND DEVELOPMENT OF STANDARD OPERATING PROCEDURES (SOPs) AND A KEY POPULATION GUIDE

The USAID/CTB (2015-2019) initiated mapping of key populations in all regions. This mapping identified the facility-based defined key populations, such as children, people with diabetes mellitus, people with HIV, and malnourished patients. In addition, prisoners, urban poor, refugees, homeless people, “holy water” attendants, miners, university students, and the elderly were identified as key populations at the community level (CTB report 2019). CTB undertook a survey in the community with hotspot settings for HIV and TB where households of HIV-positive individuals were also identified as key populations for TB. The same survey identified IDPs, the homeless, female sex

workers and their partners, miners, and the partners of miners as additional key populations for TB (Dememew et al, 2020). CTB engaged in the six shafts of the mining area and the project found out the CNR of 1,434 (per 100,000 screened population). CTB adapted a routine screening at prisons and determined the CNR of 110 at prison settings. CTB also undertook enhanced contact investigation and showed the CNR of 513 among contacts (CTB report 2019). Based on the mapping and high CNR of TB among these key populations, CTB supported the preparation of a prison SOP and framework for key populations in the “finding missed TB cases in Ethiopia” operational guide, the first essential documents for key populations in Ethiopia (figure 3).

Standard Operating Procedures for TB prevention and control in Ethiopian prisons/correctional facilities, detention centers and police stations

First Edition

February 2017
Addis Ababa



Finding Missed TB cases in Ethiopia:

Operational guide and National plan for 2018-2020.

National TB control program

FMOH

2018

Figure 3: Prison SOP and key population framework documents in Ethiopia

MAPPING OF KEY POPULATION AND REGULAR SCREENING OF KEY POPULATIONS CONTINUED UNDER THE USAID ELIMINATE TB PROJECT

During the baseline assessment conducted from July to December 2020 by the USAID Eliminate TB Project, mapping of key populations was carried out in the supported regions. Remapping was necessary because the key populations changed between different USAID mechanisms. The assessment teams identified nine types of key populations with an estimate of 1,197,885 individuals (table I).

The yield of TB among the screened key population differs. Overall, 0.4% of screened individuals were TB cases (1,700/421,729 screened). Higher proportions of TB cases were reported among missionary residents (1.8%), miners (0.4%), prisoners (0.4%), and urban slum residents/homeless (0.2%) (table I).



Miners at mining shafts. Pictures from Oromia team of Guji zone.

The USAID Eliminate TB Project determined the progress toward the second 90 of global TB during July 2020-September 2021. Only about 41% of the identified key population in the four bigger regions of Ethiopia had access to TB screening service, the highest access rates being among the residents of the missionary centers (98%) and prison inmates (80%) (table I).

In addition, the project determined the NNS to find one TB case, an indicator used to prioritize key populations of tailored intervention. The NNS was lowest among residents at missionary centers (58) and prisoners (293), indicating the need to prioritize these key populations for targeted TB case finding (table I).

Table I: Mapped key populations, proportion screened and yield, July 2020-September 2021

KEY POPULATION	# Key population registered	% Screened of registered	TB cases (% of screened)	NNS
Prison inmates	42,712	79.5	146 (0.4)	293
University/college/school students	90,671	8.9	8 (0.1)	11,334
Urban slums and homeless	26,046	11.6	7 (0.2)	3,721
Holy water attendants	173,585	63.8	8 (0.01)	21,698
Female sex workers	17,348	0.3	0 (0)	0
Mega project area (construction and factories)	14,993	54.3	5 (0.06)	2,999
Missionary center resident	34,573	98.1	594 (1.8)	58
Mining workers	605,476	35.5	928 (0.4)	652
Refugee/IDP	14,656	59.2	4 (0.05)	3,664
Total	1,020,060	41.3	1,700 (0.4)	600

REGIONS HAVE GAINED EXPERIENCE FROM THE USAID MECHANISMS

Based on the lessons learned from these USAID mechanisms, other non-supported regions started to carry out campaign-based and regular TB screenings among key populations. The initial campaign-based TB screening among prisons, mining workers, HCWs, missionaries, and universities became a clinic-based regular activity. Also, they started to report key populations during the review meetings. In the August 2021 national review meeting, almost all regions reported the TB service among key populations. For instance, during July 2020-June 2021, 1,248,288 individuals were screened, and 2,357 TB cases were identified, making the CNR 189 per 100,000 screened—30% more than the national CNR of 132 per 100,000 reported in 2020. It showed that there was a variation in the type and yield of TB in different regions—Harari city and the pastoralist regions of Afar (a region where most of its population is nomad) had a lower NNS to get one TB case as compared to other regions. This finding may indicate the need to target urban slums and pastoralist communities (National TB and Leprosy Report 2021).

INCLUDING KEY POPULATIONS AS HMIS DATA ELEMENTS FOR REGULAR MONITORING

TB services among key populations used to be recorded and reported using the field-tested registers and reporting formats developed by the USAID mechanisms or the regions. However, there has not been a standardized registration and reporting format for the key populations. The USAID Eliminate TB Project collaborated with Plan and Performance Directorate and the National TB and Leprosy Program (NTLP) to include key population data in the routine national HMIS. Through this initiative, the TB unit register and DHIS2 reporting formats have been revised to accommodate essential and selected key populations in the country.

REDEFINED PHCU APPROACH OF TB PROGRAM SUPPORT IS BEING PRACTICED

The inclusion of key populations in the TB program activities has become routine in national TB programs. Whenever TB-related training is prepared, attendants from the prison settings, refugees centers, missionary, and university clinics are being included. When joint supportive supervision is planned, the key population settings are also part of the supervision together with the public facilities.

LESSONS LEARNED AND WAYS FORWARD

Key populations are not the same in different geographic settings in Ethiopia. Therefore, there is a need to have regional or geography-specific definitions, mapping, and prioritization in the country. Health facilities, prisons, schools, and missionaries have clinics. There should be routine and universal TB screening in their clinics, rather than mass or campaign-based screening as is the case among IDPs and the homeless.

HCWs are among the population vulnerable to TB where transmission could be regarded as a professional or workplace risk (Sharma et al, 2018). As such, health facilities should be supported to adopt regular, enhanced, and confidential TB screening for health care providers. A regular and confidential TB screening at health facilities could be taken as one of the minimum packages of TB infection control.

Due to conflict, natural disasters, and the COVID-19 pandemic, IDPs are an emerging vulnerable population for TB infection and other diseases in Ethiopia. IDPs and COVID-19-infected individuals should be part of the list of key populations. This could necessitate the revision of the 2018 key population framework in Ethiopia due to the dynamic nature of key populations for TB.

Key populations could be the bridge for TB transmission between the general population and

the vulnerable population for TB (Dememew et al, 2020). Therefore, a comprehensive TB preventive measure should target these groups. Introduction of TB prevention therapy in the defined and eligible vulnerable populations, such as diabetic mellitus patients and health care providers, could be implemented. In addition to the early TB case finding, newer technologies with higher sensitivity of TB screening, such as digital AI X-ray, should be used.

Finally, the USAID Eliminate TB Project has leveraged experience with key populations in responding to the increasing number of vulnerable IDPs due to ongoing conflict in the country. The experience with key populations of the USAID mechanisms has been applied to support the integrated TB/COVID-19 screening among IDPs in Tigray and Amhara regions (USAID Eliminate TB Project year one annual report).

As the incidence and prevalence of TB declines in the general population of Ethiopia, TB prevention and control interventions ought to be tailored towards the most vulnerable, underserved, and at-risk populations in the country. NTLP should update and revise the key population framework to emphasize a differentiated, universal provision of TB care and prevention for these groups. The redefined PHCU-based TB program support should be implemented in all regions and monitored regularly. Working with stakeholders and institutions where key populations reside is of paramount importance. The reasons as to why key affected populations could not access TB care and prevention service should be explored; specifically, TB-related stigma, gender-responsiveness, and human rights-based TB intervention issues need to be sorted out.

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