



USAID
FROM THE AMERICAN PEOPLE



CHALLENGE>TB

TECHNICAL HIGHLIGHT



Intensive support for improved TB case detection: Lessons from Ethiopian public hospitals

BACKGROUND

Ethiopia has made tremendous efforts in tuberculosis (TB) prevention and control. Compared to the 1990 baseline, the incidence has declined by 42%, from 369 to 164 per 100,000 population in 2018.¹ However, Ethiopia remains among the 30 countries with a high burden of TB, TB/HIV, and drug-resistant TB (DR-TB), and it missed a third of its estimated TB cases.² Studies show that the missing TB cases are either undiagnosed or diagnosed but not reported to the National TB Program (NTP).³ Barriers to appropriate diagnostic service and poor referral linkage to treatment are two reasons that TB patients drop out. TB patients are missed both in public¹ and private hospitals, primary health care units,⁴ and in the community.⁵

There are many reasons to involve hospitals in TB care: they have a large volume of clients and a high prevalence of TB cases with comorbidities and serve key populations

(people living with HIV, children, diabetics, those on immunosuppressive treatments, etc.). Hospitals have an available pool of highly skilled professionals and often better diagnostic infrastructure and services (e.g., GeneXpert, X-ray, pathology services, etc.). Many are becoming teaching institutes and serve as platforms for quality (health sector transformation in quality and standards of care for TB are already in place). Moreover, hospitals are referral sites for complicated and difficult-to-manage TB cases and have the mandate to manage multidrug-resistant TB (MDR-TB) patients. Additionally, TB patients often prefer to attend hospitals because of the perceived higher quality of care compared to health centers.⁶

Although large numbers of TB patients are diagnosed in hospitals, considerable numbers of these cases are not screened for TB, nor is the NTP notified. Most clinicians

in these hospitals do not follow NTP guidelines, and large numbers of TB cases are diagnosed empirically resulting in over or under diagnosis of TB. Most hospitals have inadequate treatment supervision and poor treatment outcomes, with high TB mortality and development of DR-TB.^{7,8} Moreover, hospitals in Ethiopia were found

to have poor referral linkage with health centers, and, because of a high transfer out rate, a high number of TB cases with unknown or unevaluated outcomes.⁹ These factors and the need to find missing TB cases have prompted the interventions described below.

STRATEGIC RESPONSE

The USAID-funded Challenge TB (CTB) project is a main partner to the NTP in Ethiopia. It aims to improve access to quality, patient-centered TB care and strengthen TB platforms in nine regions of Ethiopia. CTB, in collaboration with NTP and regional health bureaus, is currently implementing the Hospital Initiative to End TB (HIT-TB), which started in October 2017 in all 256 regional and 7 federal public hospitals. HIT-TB interventions include integrating TB screening into all service outlets. CTB, in collaboration with government counterparts, implemented this intensive support—intensive because the mentoring of hospitals by zonal and regional teams was initially conducted monthly then quarterly, coupled with on-site capacity building and close follow-up. To achieve this, the following activities were carried out:

- Mapping hospitals in CTB regions by zonal and regional teams to assess the services provided by the facility and conduct on-site orientations and subsequent intensive mentoring and capacity building
- On-site orientation on the initiative and capacity building of hospital management and staff by zonal and regional teams
- Distribution of recording and reporting materials
- Tracking outpatient department (OPD) visitors and specialty clinic clients to conduct symptom-based screening
- Mentorship on a monthly basis in the early phases and quarterly thereafter by the cluster zonal team

RESULTS

In 2019, CTB central and zonal cluster teams and their government counterparts visited 162 regional and 7 federal hospitals. The cluster TB coordinators reported to the regional office that most hospitals have integrated TB screening into adult and pediatric OPDs, maternal services, and non-communicable disease clinics, such as diabetes mellitus.

The proportion of hospital visitors screened for TB progressively increased from 80% in 2017 to 94% in 2019 (figures 1 and 2). The number of presumptive TB cases identified doubled between 2017 and 2019. Moreover, the number of all forms of TB progressively increased each quarter to reach over twice that of baseline.

FIGURE 1. Trends of OPD visitors and TB screening in CTB regions

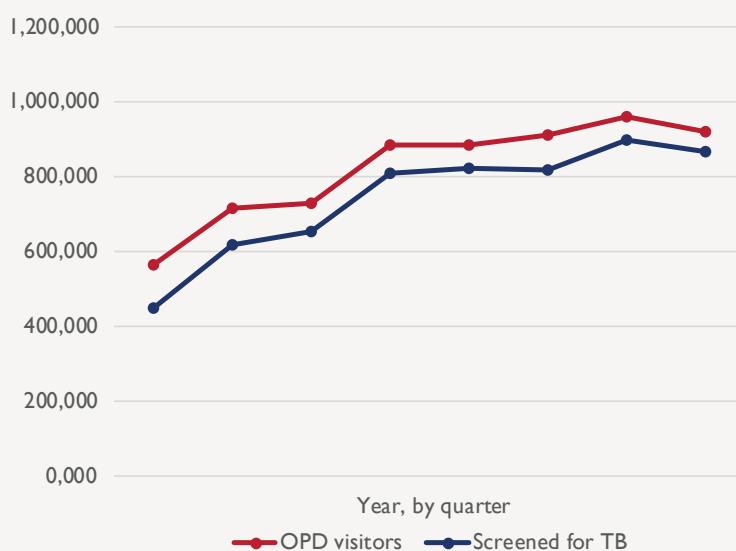
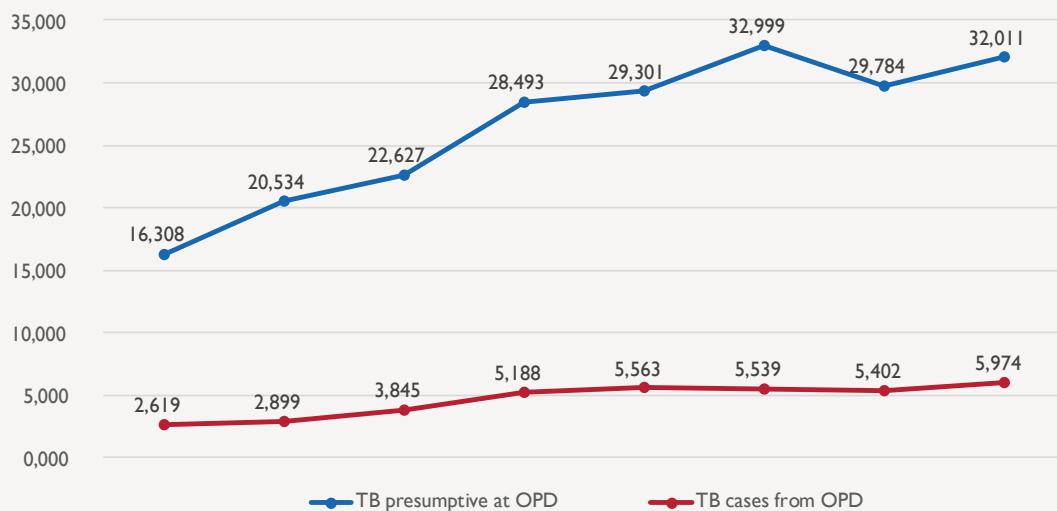


FIGURE 2. Trend of presumptive and diagnosed TB cases in CTB-supported regions

LESSONS LEARNED

Integration of TB service into all service outlets with intensive mentoring support for hospitals increased the proportion of hospital visitors screened for TB and doubled the number of presumptive TB cases and the number of all forms of TB detected. Hospitals are potential sites for detecting considerable numbers of missed TB cases, therefore, working with hospitals where the highest volume of clients visit is crucially important. Simple measures, such as intensive mentoring of hospital TB clinics and supplying recording and reporting tools, can bring significant changes in TB case detection. Lastly, the involvement of hospital management in TB service delivery, in addition to the technical staff working in the OPDs, enhances TB case detection.

WAY FORWARD

With the rapidly expanded health service coverage in Ethiopia, expanding TB service integration into all service outlets of public hospitals may contribute to increased screening of hospital clients and increase case finding. This approach could be strengthened and scaled up to health centers, and private health facilities can increase case finding by reducing the number of missed cases in Ethiopia.

Photo credit: Warren Zelman



References

- 1 Global tuberculosis report 2018. Geneva: World Health Organization; 2018. License: CC BY-NC-SA 3.0 IGO https://www.who.int/tb/publications/global_report/en/
- 2 Federal Ministry of Health of Ethiopia. Tuberculosis, Leprosy and TB/HIV prevention and control program guideline, 6th ed. 2017. <https://www.slideshare.net/suleymanfantahun/new-ethiopian-tb-guildline-november-2016>
- 3 Assefa D, et al. Missed pulmonary tuberculosis: a cross sectional study in the general medical inpatient wards of a large referral hospital in Ethiopia. BMC Infect Dis 2019; 19:60
- 4 Claassens MM, et al. Tuberculosis cases missed in primary health care facilities; Should we redefine case finding? Int J Tuberc Lung Dis. 2013; 17(5): 608–614
- 5 Tadesse T, Demissie M, Berhane Y, Kebede Y, Abebe M. Two-Thirds of Smear-Positive Tuberculosis Cases in the Community Were Undiagnosed in Northwest Ethiopia: Population Based Cross-Sectional Study. PLoS ONE 2011; <https://doi.org/10.1371/journal.pone.0028258>
- 6 Ohkado A, Uplekar M, Arias M, Voskens J. Guiding Principles and Practical Steps for Engaging Hospitals in TB Care and Control, USAID/TB CTA, 2008. https://www.challengetb.org/publications/tools/ua/Guiding_Principles_Practical_Steps_Engaging_Hospitals_TB_Care_Control.pdf
- 7 Belay Tessema, et al. Treatment outcome of tuberculosis patients at Gondar University Teaching Hospital, Northwest Ethiopia. A five year prospective Study. Biomed Central 2009. https://www.challengetb.org/publications/tools/ua/Guiding_Principles_Practical_Steps_Engaging_Hospitals_TB_Care_Control.pdf
- 8 Biruk M, et al. Treatment Outcomes of Tuberculosis and Associated Factors in an Ethiopian University Hospital. Advances in Public Health. 2016. <http://dx.doi.org/10.1155/2016/8504629>
- 9 Belayneh T, et al. Characteristics and Treatment Outcomes of "Transfer-Out" Pulmonary Tuberculosis Patients in Gondar, Ethiopia. 2016. Corporation Tuberculosis Research and Treatment <http://dx.doi.org/10.1155/2016/1294876>

Acknowledgment

Thank you to all of the staff from Challenge TB Ethiopia for their support in the development of this technical highlight.

Authors

This publication was written by Dr. Tadesse Anteneh with Dr. Daniel Gemechu with contributions from Nebiyu Hiruy.

For more information, please contact lessons@msh.org.