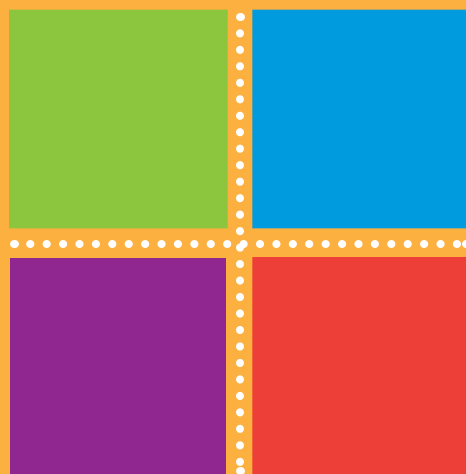


Simplified Checklist for **TB Infection Control**





Simplified Checklist for TB Infection Control

Project timeline: January–September 2010

Background

The Tuberculosis Control Assistance Program (TB CAP) is a U.S. Agency for International Development (USAID)-supported coalition of partners that provide technical assistance for TB control worldwide. FHI, working with other TB CAP partners, developed a **Simplified Checklist for TB Infection Control**, targeting community health workers (CHWs) in sub-Saharan Africa, to prevent tuberculosis transmission in high HIV prevalent community settings. The following partners collaborated:

- Centers for Disease Control and Prevention (CDC)
- World Health Organization (WHO)
- Japan Anti-Tuberculosis Association (JATA)
- Management Sciences for Health (MSH)
- KNCV Tuberculosis Foundation
- FHI

TB, HIV, and TB/HIV patients face numerous obstacles when seeking services at traditional clinic and hospital settings that are often too few and too far from where patients live. Recognizing these barriers, national TB and HIV programs have created community-based care and treatment programs. These programs allow CHWs to provide TB treatment and treatment support, such as direct observation of therapy (DOT), and educate people on TB and other public health topics. These efforts have led to improved health outcomes for people through early discovery and treatment of their disease.

TB infection control (TB IC) measures at the community level are critically important—particularly in areas of high HIV prevalence. Most TB IC efforts to date, however, have focused on larger healthcare settings and facilities, neglecting community settings. As a result of this neglect, there are limited resources available to help CHWs avoid becoming infected themselves while working with the communities they serve. Community health workers also lack adequate educational materials to use in their day-to-day educational activities with patients and the community.



Simplified Checklist for TB Infection Control

Goal

The goal of the project is to increase attention and action related to TB IC issues at the community level and thus to reduce the risk of TB transmission from clients to CHWs and to reduce household and community transmission. The Checklist is designed to provide CHWs, supervisors, and program managers (from NTPs, NGOs, CBOs, and others) with very practical ways to properly implement TB IC and to minimize risk of transmission within community residential settings, including families and households.

Methods

A **literature review** of existing tools and documentation on TB IC for CHWs was conducted, and a summary document was developed. (The literature review is also included on this compact disc.) Because the topic is fairly new, much of the research was focused on online information, including the “gray literature” and included sources referred to by peer organizations working in TB and TB/HIV.

An **initial three-part checklist** was developed focusing on TB IC in households and in community settings, as well as on organizational support for CHWs who work with TB patients. This initial draft was based on existing WHO, CDC, and other IC guidelines.

FHI and collaborating partners convened an interactive **stakeholder workshop** of TB CAP and non-TB CAP partners in Livingstone, Zambia, in April 2010. Workshop participants (40) included representatives from organizations that support implementation of community-level activities in TB and TB/HIV control in 11 sub-Saharan African countries: Zimbabwe, Zambia, Mozambique, Swaziland, Lesotho, South Africa, Uganda, Tanzania, Kenya, Malawi, and Ghana.

The workshop’s objectives were to:

- Discuss why TB IC in households and communities is important
- Discuss key needs, barriers, and opportunities for implementing TB IC in households and communities
- Obtain stakeholder input on and reactions to a draft “Simplified Checklist for TB Infection Control”



Simplified Checklist for TB Infection Control

The three-part checklist was modified during the workshop based on participants' experiences at the community level, which they discussed in small groups. Key recommendations from the workshop included:

- Conduct systematic field testing to ensure feasibility and acceptability, to include supervisors and public health program managers as well as those working in the field
- Produce the final checklist in English as a generic document in an electronic format, so that each country or organization can customize and translate them into local languages, if necessary

The checklist was **field-tested** with CHWs and supervisors in two peri-urban sites in Zambia (Ndola and Kitwe) and an urban and rural site in Ethiopia (Addis Ababa and Assela) during August and September 2010.

Output

A three-part simplified checklist has been developed for modification and local use by community health workers to prevent tuberculosis transmission, particularly in high HIV prevalent community settings.

Next steps

Decisions about the checklist's format and how it will be used will be made through individual country NTP programs to ensure that attention is given to local contexts and situations. It is highly recommended that the checklists be introduced in the context of NTP and ministries of health programs and priorities. It is recommended that the checklist be used in TB IC trainings of community health workers.

Inquiries

Please contact Stella Kirkendale at skirkendale@fhi.org for more information or for an electronic version of this document in Microsoft Word.



Simplified Checklist for TB Infection Control for Community Health Workers and Volunteers Working in High HIV Prevalence Settings in sub-Saharan Africa

The following checklists were developed to help monitor and reduce the risk of tuberculosis (TB) transmission in households and to reduce the risk of exposure to TB among community health workers (CHWs) in settings with high HIV prevalence.

Checklist	Why do we need this checklist?	Who will use this checklist?	When to use this checklist?	How to use this checklist?
Checklist 1 Household	<ul style="list-style-type: none"> ■ To guide CHWs in practicing TB IC in households to improve CHWs' own safety ■ To facilitate prompt identification of active TB cases in households ■ To educate those in households where TB is present so household members can reduce the risk of transmission to others in or visiting their home 	CHWs	<ul style="list-style-type: none"> ■ At least once per patient, especially in the early phase of community-based TB treatment ■ Periodically during home visits for TB treatment 	CHWs can bring the checklist to patients' homes and complete the checklists by observing or interviewing the patient and the household members
Checklist 2 Community	<ul style="list-style-type: none"> ■ To reduce the risk of TB transmission in community settings where people with TB and people living with HIV (PLHIV) may gather (such as at a traditional healer's place, church, or club) ■ To plan for improving TB IC awareness for leaders in the community 	CHWs or their supervisors	<ul style="list-style-type: none"> ■ At least once per year 	<ol style="list-style-type: none"> 1) Look at the community's map 2) Identify locations where people gather 3) Use one checklist per location 4) Complete the checklist by observing the activity at that location and by interviewing the head of that community venue
Checklist 3 Organizations	<ul style="list-style-type: none"> ■ To reduce CHWs' risk of exposure to TB and their risk of developing TB ■ To plan for TB IC training and TB IC interventions for CHWs 	CHWs' supervisors/ program managers	<ul style="list-style-type: none"> ■ At least once per year 	Supervisors/program managers complete this checklist and share results with CHWs



Checklist 1: TB Infection Control in Households

NAME OF COMMUNITY HEALTH WORKER (CHW)

DATE

Instructions

Please complete the following checklist by interviewing the TB client/patient in his or her home.

(NA = not applicable or do not know.)

- Use this checklist at least once per client/patient, especially in the early phase of community-based TB treatment. Periodically repeat the checklist assessment during home visits for TB treatment.
- Explain the purpose of the checklist to your clients/patients, and reassure them that all information will remain confidential.
- Explain that the interview will take about 30 minutes to complete, and then obtain the client's/patient's permission to continue.
- After completing the checklist, discuss the results with supervisors and relevant staff to whom you will submit the checklist.

Information about the TB client/patient (from TB register/TB treatment card)

HEALTH FACILITY

TB NUMBER

NAME OF CLIENT/PATIENT

AGE

ADDRESS OF CLIENT/PATIENT

DATE CLIENT /PATIENT STARTED TB TREATMENT

Client-focused activities

	Yes	No	NA/do not know	Actions/comments
1. Is the client/patient swallowing and tolerating the TB medicine?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If not, describe problems and discuss importance of letting the TB treatment team know.
If yes, type of directly observed therapy (DOT):				
■ No DOT (self medication)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
■ DOT by family member	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
■ DOT by CHW at home	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
■ DOT by health worker at the health facility	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
■ Other _____				

Client-focused activities

	Yes	No	NA/do not know	Actions/comments
<p>2. Ask the client/patient if he/she has noticed anything unusual about his/her health since starting treatment. Don't probe. Check the appropriate boxes if clients mention any of these health issues:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Skin rash, itching <input type="checkbox"/> Nausea (feeling of vomiting) or actual vomiting <input type="checkbox"/> Abdominal pain <input type="checkbox"/> Joint pain <input type="checkbox"/> Loss of or reduced appetite <input type="checkbox"/> Blurry vision (suddenly cannot see properly, in one eye or both eyes) <input type="checkbox"/> Numbness or pain in the hands or on the bottom of the feet 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>If not, reassure the client</p> <p>If the problem is persistent or worsening, provide a referral to the health center</p>
<p>3. Does the client/patient have access to food to take with medicine?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Describe
<p>4. Has the client/patient disclosed his/her TB status to household members?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If not, discuss pros and cons of disclosure
<p>5. Have any other household members been coughing? If yes, probe for how long.</p> <p>And how many people live in this house in addition to the person with TB? _____ people</p> <ul style="list-style-type: none"> <input type="checkbox"/> How many children less than 5 years old _____ <input type="checkbox"/> Elderly _____ <input type="checkbox"/> Pregnant women _____ 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If coughing for more than 2 weeks, advise them to go to the health facility for TB screening

Client-focused activities	Yes	No	NA/do not know	Actions/comments
<p>6. Have any household members been screened for TB? If so, how many? _____</p> <p>Type of TB screening (multiple answers possible):</p> <ul style="list-style-type: none"> <input type="checkbox"/> Clinical examination by health facility staff <input type="checkbox"/> Sputum test <input type="checkbox"/> Chest x-ray <input type="checkbox"/> Evaluate for signs and symptoms of TB 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>7. Is the client/patient able to demonstrate good cough hygiene? If yes, which actions does he or she take?</p> <ul style="list-style-type: none"> <input type="checkbox"/> Covers mouth with cloth <input type="checkbox"/> Covers mouth with arm <input type="checkbox"/> Uses a mask 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If not, teach the proper methods
<p>8. Does the client/patient know how to safely dispose of sputum? Examples: Coughing into disposable cloth or container with a secure lid.</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If not, teach the proper methods
<p>9. Until the client/patient becomes sputum smear-negative, which usually happens within a few weeks of starting TB treatment, he or she remains infectious to others. Does the client/patient know how to reduce the risk of exposing others to TB while he or she is still contagious? Examples include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Socializing in outdoor (and not indoor) spaces during the infectious period (or until sputum smear-negative) <input type="checkbox"/> Greeting household visitors outside rather than inside <input type="checkbox"/> Avoiding crowded transportation, if possible 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If not, instruct in ways to protect others
<p>10. Does the client/patient know how to reduce transmission of TB if indoor contact with visitors cannot be avoided? ("Visitors" are people who are not regular members of the household.) Examples include:</p> <ul style="list-style-type: none"> <input type="checkbox"/> Having client/patient stay in a separate room, with door closed <input type="checkbox"/> Opening doors and windows <input type="checkbox"/> Using good cough hygiene 	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	If not, instruct the client/patient in ways to protect others

Client-focused activities

	Yes	No	NA/do not know	Actions/comments
<p>11. Are the client/patient and household members able and willing to maximize the time when windows and doors are open during the day? (Are there windows that can be opened?)</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Instruct about importance of ventilation to reduce the spread of TB
<p>12. Has the client/patient been tested for HIV?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>If not tested, refer to HIV counseling and testing</p> <p>If tested more than 6 months ago, recommend re-testing</p>
<p>13. If the client/patient was tested for HIV, what was the result?</p>			<input type="checkbox"/>	<p>If negative, reinforce how to remain negative</p> <p>If HIV-positive, check whether she/he is receiving services or needs referral</p>
<p>14. Have other household members been tested for HIV?</p> <p> ■ Is the HIV result known?</p> <p> ■ Does their HIV care provider know that they have been exposed to someone with TB?</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<p>If not, explain and advise on the benefits of HIV testing</p> <p>If HIV-positive, advise for TB screening at the health facility and Isoniazid Preventive Therapy (IPT) if eligible</p>
<p>15. Does the client/patient have any questions?</p> <p>If so, list them:</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	Respond accordingly

During your visit, please also complete the following checklist.

Environmental issues to be observed by CHW at each visit	Yes	No	NA/ do not know	Describe
1. Does the house have windows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are windows and doors open to allow maximum ventilation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. Does the client/patient have lots of visitors?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Are only household members present?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
3. Are there any especially vulnerable people living in the household with the client/patient?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
■ Children less than 5 years old?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
■ Those who are known to be HIV positive?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
■ Elderly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
■ Pregnant women?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
4. Does the client/patient cover his/her mouth while coughing?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
Personal Protection for CHW	Yes	No	NA/ do not know	Describe
1. Whenever possible, are you taking your client/patient outdoors to collect sputum samples?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
2. If the client/patient has multi-drug-resistant TB (MDR) or extensively drug-resistant (XDR) TB, are you using a fit-tested face mask (respirator) while the patient is still contagious?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Sketch a floor plan of the home (that is, what it looks like inside) that you visited and note where the TB client/patient sleeps in relation to others.

Other people living in the home

Example: Tenant, mother-in-law

	Age	Male / Female	HIV status (if known)	TB symptoms they may have
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				
9.				
10.				
11.				

Summarize the main finding of the visit (strengths and weaknesses regarding TB IC).

Outline your recommendations and next steps.

Thank them before you leave.





Checklist 2: TB Infection Control in Community Settings

NAME OF COMMUNITY _____

Observed setting: Church Traditional/faith healer's place School Movie/video house Bus/taxi
 Market Bars Other (describe) _____

NAME OF COMMUNITY HEALTH WORKER (CHW) _____

DATE _____

TIME _____

NAME OF PERSON IN CHARGE OF THE SETTING _____

CONTACT INFORMATION (ADDRESS, TELEPHONE) _____

CHW'S PLACE OF WORK _____

Instructions

Introduce yourself. Explain that the purpose of your visit is to talk about TB and how to reduce the risk of TB transmission in community settings where people with TB and HIV may gather. Explain that you want to help develop a plan for improving awareness of TB infection control in the community.

Ask the person in charge of the setting the following questions.

	Yes	No	NA/ do not know	Interviewee's responses	Supervisor's comments
1. Please explain what you know about TB (probe): <ul style="list-style-type: none"> ■ Transmission of TB (airborne) ■ Signs and symptoms of TB (chronic cough for more than 2 weeks, night sweats, weight loss) ■ Treatment (TB is curable, even with HIV, as long as the TB patient completes the full course of medicine) ■ Prevention (cough hygiene, case finding, natural ventilation) 					
2. What do you think should be done to educate about good cough hygiene?					

Ask the person in charge of the setting the following questions.

	Yes	No	NA/ do not know	Interviewee's responses	Supervisor's comments
3. Do people commonly gather in this place for more than 2 hours at a time?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
4. Is it common for small children (less than 5 years old) to spend much time here?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5. When people are here, is it common to keep most					Brainstorm about how to maximize ventilation
<input type="checkbox"/> Doors open?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Windows open?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Observe the following

	Yes	No	NA/ do not know	CHW's Observations	Supervisor's comments
1. Is the place					
<input type="checkbox"/> An open space (no walls, open air)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> A closed space?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
2. Does the place have windows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
3. During your visit, are most of the					
<input type="checkbox"/> Windows open?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
<input type="checkbox"/> Doors open?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Observe the following

	Yes	No	NA/ do not know	CHW's Observations	Supervisor's comments
4. Do you see people coughing and spitting in this location?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
5. Do you see people covering their mouth when they cough?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
6. Are there materials on TB infection control readily available and visible to people who come to this location?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

Other observations

Action taken by CHW on site (e.g., education, direct feedback, action plan/timeline for CHW, words of encouragement)

What should the supervisor do or whom should he or she contact to facilitate recommended changes?

Comments and actions by supervisor (performance/supervision, take actions to next level)



Checklist 3: What Organizations Should do to Prevent TB in Community Health Workers

NAME OF SUPERVISOR / PROGRAM MANAGER

HEALTH FACILITY

DATE

Please complete the following checklist and share with your community health workers (CHWs). Thank you very much.

Checklist	Yes	No	NA/do not know	Comments
<p>1. Does your organization or institution have a policy on TB infection control in households and community settings?</p> <p> ■ If not, does your organization follow district or other local guidelines?</p>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/>	<p>Insert name and contact information of responsible person</p>
<p>2. Does your organization have written procedures on TB infection control? If yes, does it specify:</p> <p> ■ Personal protection equipment?</p> <p> ■ Referral of patients?</p>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	
<p>3. Is there a TB infection control focal person responsible for training in your organization?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>4. Has your organization provided CHWs with orientation or training about TB infection control in households and community settings?</p> <p> ■ If yes, when was the last time they were trained or received a refresher course?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>5. Do CHWs have access to TB screening at least once per year or at any time that you might have symptoms of active TB?</p> <p> ■ If yes, name location</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Checklist	Yes	No	NA/do not know	Comments
<p>6. Does your organization provide access to free and confidential HIV testing? ■ If so, where?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>7. If a CHW in your organization is HIV positive: ■ Would he or she have access to HIV care and treatment services? ■ Would the CHW have access to isoniazid preventive therapy (IPT) for TB (where applicable)?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>8. If a CHW is HIV positive, it is recommended that she or he try to avoid exposure to cases of active TB. ■ Does your organization provide job relocation for HIV-positive CHWs or assign them other responsibilities away from TB patients? ■ If an HIV-positive CHW cannot re-locate and is the only one trained to attend to TB patients, what steps will the organization take to protect him or her from getting exposed to TB?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<p>If so, list them</p> <p>Describe</p>
<p>9. Does your organization have a strategy for finding active TB cases in households and communities?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>10. Does your organization collaborate with community groups to intensify TB case findings (actively identify and screen for TB among high-risk people?) ■ If so, how?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>11. Does your organization keep track of (e.g., have a register) of CHWs that have developed active TB each year?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	
<p>12. If a CHW may be caring for a client with multi-drug-resistant (MDR) or extensively drug-resistant (XDR) TB who will be receiving community-based TB treatment, does your organization provide the CHW a proper face mask (respirator) that has been “fit-tested” to use until the patient is no longer contagious?</p>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	

Please list areas in which the CHW needs technical support.



Acknowledgments

- U.S. Agency for International Development and TB CAP
- Jintana Ngamvithayapong-Yanai, PhD, JATA
- Carol Hamilton, MD, FHI
- Paul Jensen, PhD, CDC
- Seraphine Kabanje, MD, and Amos Nota, FHI Zambia
- Yared Kebede Haile, MD, and Max Meis, MD, KNCV Netherlands
- Rose Pray, RN, WHO
- Maria Pia Sanchez, RN, MSH
- Ezra Shimeles, MD, KNCV Ethiopia
- Participants in Livingstone, Zambia workshop, from the following organizations: PIH Lesotho, Wellness Center Swaziland, MSF Khayelitsha, PATH Tanzania, MSH Malawi and Ghana, ICW Uganda, CWG in Health Zimbabwe, COSH KZN South Africa, Aurum Institute South Africa, FHI Mozambique, NETMA+ Kenya. Zambia: CIDRZ, CHEP, ZAMBART, COBTAG, CHAZ, ZPCT, JATA Zambia, NTP, AMDA, CDC, DHMT, and WHO.
- TB treatment and adherence support workers, Ndola and Kitwe, Zambia
- GLRA Ethiopia
- Government health extension workers and HAPSCO nurse supervisors, Addis Ababa and Assela, Ethiopia
- Francesca Stuer, MSc, RN and Altaye Kidane, MD, FHI Ethiopia
- Stella Kirkendale, MPH, community consultant, FHI

FHI
P.O. Box 13950
Research Triangle Park, NC 27709 USA
Telephone: 919.544.7040
Web Site: www.fhi.org

The Global Health Bureau, Office of Health, Infectious Disease and Nutrition (HIDN), U.S. Agency for International Development, financially supports this document through TB CAP under the terms of Agreement No.GHS-A-00-05-00019-00.

This document is made possible by the generous support of the American people through the U.S. Agency for International Development (USAID). The contents are the responsibility of TB CAP and do not necessarily reflect the views of USAID or the United States Government.