TUBERCULOSIS CONTROL PROGRAMMING FOR PVOS

FACILITATORS' MANUAL

Developed by the CORE TB Working Group

The **CORE Group**, a 501 (c) 3 membership association of international nongovernmental organizations based in Washington, D.C., promotes and improves the health and well being of children and women in developing countries through collaborative NGO action and learning. Collectively, its members work in more than 168 countries, supporting health and development programs.

Recommended Citation

Tuberculosis Working Group, CORE Group, *Tuberculosis Control Programming for PVOs: Facilitator's Manual*, Washington, D.C.: April 2006.

Abstract

The purpose of this manual is to assist private voluntary organizations (PVOs) and/or nongovernmental organizations (NGOs) to organize and facilitate a course on Tuberculosis (TB) Control Programming for PVOs/NGOs at the country or regional level. The curriculum is designed to prepare PVO/NGO and partner staff to implement high quality TB control programming, including diagnosis, case finding, drug supply, information analysis and use, working with partners, communication issues, incentives and enablers, private – public sector systems, and TB co-infection with HIV.

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This publication was made possible in part by support from the Bureau for Global Health, U.S. Agency for International Development (USAID), under cooperative agreements FAO-A-00-98-00030 and GHS-A-00-05-00006-00. This publication does not necessarily represent the views or opinion of USAID.

Acknowledgements

CORE's Tuberculosis Working Group extends sincere gratitude to the many experts who shared their time and talent in creating, reviewing and editing this guide. These include:

Lisa Adams, Dartmouth Medical School/CORE Group Consultant
Dennis Cherian, World Vision
Alka Dev, Doctors of the World
Ann Hendrix-Jenkins, CORE Group Consultant
Karen LeBan, CORE Group
Mary Linehan, PATH
Rob Northrup, Project HOPE
Areana Quinones, CORE Group
Martha Regan-Smith, Dartmouth Medical School
Maarten van Cleef
Ellen vor der Bruegge. Freedom from Hunger
Emily Wainwright, USAID

Introduction

Tuberculosis (TB), one of the oldest diseases known to humankind, continues to claim roughly 2 million lives each year. Approximately one-third of the world's population is infected with *Mycobacterium tuberculosis*, the bacterium that causes TB. Each year, close to 9 million new TB cases occur. The developing world is the worst affected with over 90% of all TB cases and TB deaths. Tuberculosis kills more youth and adults than any other single infectious agent in the world today. The picture is even bleaker when an individual is co-infected with HIV. Today, tuberculosis has become the leading cause of death among HIV-infected individuals, accounting for about one-third of AIDS deaths worldwide. In some of the worst affected countries in Sub-Saharan Africa, up to 70% of smear-positive pulmonary TB patients are HIV-infected.

Despite these overwhelming statistics, great strides in controlling tuberculosis have been made. The concerted efforts of public health authorities, clinicians, policy-makers, technical assistance agencies, laboratory specialists and others have resulted in nearly universal application of the effective TB control strategy – the DOTS strategy – with resultant decreases in the TB burden in many parts of the world. Global TB mortality is decreasing. Critical to the successes achieved in tuberculosis control is the work of nongovernmental organizations (NGOs)/private voluntary organizations (PVOs). The ninth World Health Organization's global tuberculosis report expressly stated the important role that NGOs can and have played in the fight to control TB:

> "*The increasing contributions of nongovernmental organizations (NGOs) and community groups are clear expressions of the growing commitment of civil society to TB control. The work of these groups puts patients at the centre of the DOTS strategy, and improves access to TB services in remote areas and among disadvantaged and marginalized populations.*"[1]

The CORE Group is committed to supporting NGOs/PVOs in their efforts to design and implement effective TB control projects operating in collaboration with national TB programs. This Facilitators' Manual came out of the expressed need to strengthen the technical capacity of PVOs, particularly those that are considering applying to USAID's Child Survival and Health Grants Program for TB funding. Based on input from the PVOs themselves, this Faciliators' Manual is the blueprint for a course aimed at building capacity in TB control programming among PVO field and headquarters staff. This course was piloted in the Washington D.C. area in October 2004 and revised based on the lessons learned from that experience. The present curriculum was used in a TB course held in Chennai, India in February 2006. As the only course designed specifically for PVOs, we hope that this manual will be used by others wishing to improve the technical quality of TB programs implemented by PVOs.

We wish you success and perseverance in the fight against TB.

The CORE TB Working Group

[1] Global tuberculosis control: surveillance, planning, financing. WHO Report 2006. Geneva, World Health Organization (WHO/HTM/TB/2006.362).

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Use of the Manual

The purpose of this manual is to assist you to organize and facilitate a course on Tuberculosis Control Programming for PVOs/NGOs in your country or region. The CORE Group—an association of more than 44 International Non-Governmental Organizations—supports courses such as this as part of its mission to "strengthen local capacity on a global scale to improve the health and well-being of children and women in developing countries through collaborative NGO action and learning."

The purpose of this course is to offer an overview of TB programming to PVO/NGO program managers, or supervisors of program managers, that are interested in getting their organization involved in TB programming for the first time (especially if applying for the USAID Child Survival and Health Grants Program (CSHGP), or improving/expanding their current TB work.

The course utilizes a practical hands-on curriculum that was developed in 2004, field tested in the US, refined, and tested again in a regional workshop in Chennai, India in 2006. This curriculum is designed to prepare PVO/NGO and partner staff to implement high quality TB control programming including diagnosis, case finding, drug supply, information analysis and use, working with partners, communication issues, incentives and enablers, private – public sector systems, and TB co-infection with HIV.

This manual provides step-by-step guidelines for facilitating this workshop. The manual includes recommendations for who should attend the workshop, a recommended daily agenda, detailed information to be presented in each session, learning objectives for all sessions, and examples of case studies an resources that can be presented and discussed.

The fact that you have this manual, and are considering organizing a course, means that you have recognized the magnitude of the TB problem in your country and understand that PVOs and NGOs have a role in scaling up prevention and control activities.

GETTING STARTED: Facilitators, Participants, and Logistical Arrangements

In this section we will lay out many of the issues to consider in preparation for the five-day course. Recall that the overall purpose of the course is to offer an overview of TB programming to PVO/NGO program managers, or supervisors of program managers, that are interested in getting their organization involved in TB programming for the first time or improving/expanding their current TB work.

To accomplish this purpose we propose the following objectives for the workshop. By the end of the workshop, participants will:

- Understand the basic facts about tuberculosis from the individual to the global level.
- Be familiar with the internationally recommended TB control strategy (DOTS)
- Understand the range of potential roles for PVOs in TB control programming.
- Understand the logical steps to preparing a TB control project
- Have evaluated whether their organization is appropriately positioned to pursue expanded TB control programming.
- Have strategized about their organization's expansion and/or innovation in TB control programming.
- Have identified relevant institutional, human and technical resources for high-quality TB programming.

Identifying Facilitators: Who should Teach the Course?
Identify an overall workshop facilitator—someone who will present the entire workshop and has good leadership skills. This person will:

  - Act as a liaison among the organizers, presenters and participants
  - Make daily announcements and get the program started each day
  - Assure overall time management of the workshop
  - Organize different session facilitators who will teach and lead different sessions based on their area of interest/expertise
  - Assure, along with session facilitators, that all presentations are loaded and saved onto a computer

During the course there are a number of sessions that can be presented by different facilitators based on there are of expertise. Session facilitators should be chosen based on level of knowledge and skill on topic to be presented, leadership and facilitation skills, and understanding of PVO/NOG role in TB programming. It is recommended that session presenters be invited from partner agencies such as the Ministry of Health TB Program, International Union Against TB and Lung Disease (IUATLD), WHO TB Department, Stop TB Partnership, and PVOs/NGOs with good TB program experience.

Identifying Participants: Who should attend this course?

It is recommended that participants fill out an application to determine their eligibility for the course and ensure that they have the appropriate level of commitment, knowledge and experience. Participants should be Managerial staff of PVOs or NGOs either headquarters or field-based, that are interested in expanding TB control programming. They should have limited field experience in TB control programming or wish to expand their TB control portfolio of activities are most appropriately suited for this course. Ideally, an organization will be represented by a staff member both from headquarters and from a field site. Individuals who are employed by a CORE member PVO should be given priority. Independent consultants and other non-affiliated individuals should be accepted at the discretion of the course organizers.

Course Logistics
You are encouraged to hire a full-time course manager—someone with experience in running and managing workshops. This person can help with all the logistical activities such as identifying a location for the course, handling registration, compiling participant notebooks and materials, scheduling site visits, hiring a workshop rappatour, managing daily registration process, planning social events, and managing transportation and participant travel.

Workshop Location
Ideally, the course location will be a conference center with adequate lodging nearby or a hotel where all participants can stay throughout the course. Issues to consider:

- Small-group work is an important part of the agenda so the venue should have break-out rooms.
- Break-out rooms should all have flip-chart stands, paper and markers for small-group work.
- The plenary room must have a "PowerPoint"-type projector or overhead projector and a large screen.
- The room should have microphones for speakers and mobile "floor microphones" to allow participants to ask questions.

Registration Fee
As this course provided hands on learning and professional development opportunities for the participants, It is recommended that a registration fee be charged and collected prior to arrival to the course. A Minimum of US $100 is considered reasonable.

GETTING READY FOR THE COURSE: The TO DO LIST for Trainers and Participants

Upon Registration

Participants receive via email logistical information: start and end dates/times, location, and travel guidance/directions. Participants are advised that more detailed logistical guidance will be sent a few weeks prior to start of the course. Participants are also clearly advised on which expenses they/their organization will be expected to cover and what will be provided by the course organizers. Finally, participants will be reminded to make necessary travel arrangements (including obtaining visas if necessary) well in advance. A letter of invitation will be attached as needed.

Participants are required to supply their specific travel plans to the course organizers as soon as reservations are made and at least one week prior to the start of the course.

One Month Prior to Course

Participants are sent their pre-arrival assignments.
Assignment # 1. Participants are asked to:

- know their organizational capacity and plans related to future or current TB control programming;
- select a particular country or region(s) where their organization currently has or is considering initiating TB control programming;
- collect and bring to the course relevant background materials including available TB epidemiological data (and HIV epidemiological data if appropriate) from their chosen country/area;
- obtain and bring a copy of the National TB Program (NTP) action plan or manual from the selected country (this may be possible for PVOs with an in-country office in the chosen country). Guidance is offered on where and how these documents and data may be found;
- be prepared to design or revise/expand a TB control intervention or set of interventions for their organization as part of the final exercise of the course.

Before coming to the course, participants are encouraged to discuss the location and design of the TB intervention they will propose at the course with their supervisors or relevant organizational staff.

Assignment #2. Participants are asked to:

- complete enclosed pre-course reading
- OPTIONAL: complete accompanying questions on reading and bring to course (note: if these are used, answers must be provided on Day 1 and, if possible, time allotted for discussion).

Course organizers must follow-up with participants who haven't sent in travel information or assignments. Offer help or guidance to participants as needed, especially with assignment #1.

Two Weeks Prior to Course

Information sent regarding transportation from airport to course site.

Assemble participant course notebooks with readings, copies of powerpoint presentations, and other course documents. Compile additional background or reference materials to be distributed to participants at the course.

One Week Prior to the Course

Obtain copies of PowerPoint presentations and arrange for necessary media and equipment for every session. Load presentations onto computer and check all A-V tools. Obtain and organize general supplies and equipment.

Course agenda at a glance:

#	DATE	DURATION	TIME
	DAY OF ARRIVAL		
	Registration		
	Dinner	1 hour	6:00-7:00
	Stories of TB	30 minutes	7:00-7:30
	DAY 1		
	Registration		
	Introduction	1 hour	8:30-9:30
1	TB-the patient and disease & DOTS Strategy	45 minutes	9:30-10:15
	BREAK	15 minutes	10:15-10:30
2	TB as a global health crisis	45 minutes	10:30-11:15
3	TB case detection and diagnosis	1 hour	11:15-12:15
4	Role of the laboratory	30 minutes	12:15-12:45
	LUNCH	1 hour	12:45-1:45
	Visit to smear microscopy lab and regional lab (where cultures performed)	3 hours	1:45- 4:45
	Daily Evaluation/Announcements	5 minutes	4:45-4:50
	DAY 2		
5	TB treatment	1 hour	8:30-9:30
6	Managing TB drugs	1 hour	9:30-10:30
	BREAK	15 minutes	10:30-10:45
7	Recording and Reporting	1 hour	10:45-11:45
8	Policy and advocacy	1 hour	11-45-12:45
	LUNCH	1 hour	12:45-1:45
9	Intro to TB project design project	45 minutes	1:45-2:30
10	Supporting Patients and DOT - part 1	1 hour	2:30-3:30
	BREAK	15 minutes	3:30-3:45
	Supporting Patients and DOT - part 2	1 hour	3:45-4:45
	Daily Evaluation/Announcements	5 minutes	4:45-4:50
	DAY 3		
11	Supervision, Monitoring and Evaluation	1.5 hours	8:00-9:30
12	Visit to TB clinic	3 hours	9:30-12:30
	LUNCH	1 hour	12:30-1:30
	Debriefing of TB clinic visit	30 minutes	1:30-2:00
13	Partnerships in TB Control	45 minutes	2:00-2:45
14	MDR-TB	45 minutes	2:45-3:30
	BREAK	15 minutes	3:30-3:45
15	Pediatric TB	45 minutes	3:45-4:30

	Daily Evaluation/Announcements	5 minutes	4:30-4:35
	DAY 4		
16	TB & HIV	1 hour	8:30-9:30
17	PPM/Private Sector-part 1	1 hour	9:30-10:30
	BREAK	15 minutes	10:30-10:45
	PPM/Private Sector-part 2	30 minutes	10:45-11:15
18	Changing Behavior/Training	1 hour	11:15-12:15
	LUNCH	1 hour	12:15-1:15
19	Work on project design with facilitator	1 hour	1:15-2:15
20	Visit to a PPM site or to a private practitioner's office	3 hours	2:15-5:15
	Daily Evaluation/Announcements	5 minutes	5:15-5:20
	DAY 5		
21	Project design presentations (1st half)	2 hours	8:30-10:30
	BREAK	15 minutes	10:30-10:45
	Project design presentations (2nd half)	2 hours	10:45-12:45
	LUNCH	1 hour	12:45-1:45
22	Closing--review course highlights, discuss follow up and present certificates	1 hour	1:45-2:45

TUBERCULOSIS SESSION SUMMARY		
TITLE	**OBJECTIVES**	**KEY MESSAGES**
1. Tuberculosis—The Patient and the Disease	▪ Understand how TB is transmitted and its pathogenesis. ▪ Be familiar with the DOTS strategy, the internationally recommended strategy for TB control.	✓ TB is primarily spread through airborne transmission to those in close contact (e.g., shared living space) with an untreated TB patient when s/he coughs TB bacteria into the air. ✓ The DOTS strategy, which targets infectious adults TB cases, has become the internationally accepted approach to controlling TB worldwide.
2. TB as a Global Health Crisis	▪ Understand the current global epidemiology of tuberculosis ▪ Have discussed why the global health crisis exists	✓ Many different factors—poorly managed TB control programs in the past, the HIV epidemic, poverty—have led to an increase in TB worldwide, resulting in a global crisis.
3. TB Case Detection and Diagnosis	▪ Understand the global case detection goal and the rationale for passive case finding under DOTS ▪ Have identified barriers to case detection and interventions to improve the case detection ▪ rate ▪ Know why sputum microscopy is the recommended diagnostic method for DOTS over other methods. ▪ Understand the overall TB diagnostic algorithm	✓ The international target for case detection of smear positive TB cases is 70%. ✓ Treatment success rates must be at 85% or above before active case finding is appropriate. ✓ The process from the first sign of symptoms to a definitive diagnosis of TB is complex; errors and drop-outs can occur at all stages of this process. ✓ NGOs can play a role in improving case detection by finding ways to reduce barriers to care seeking (e.g., stigma reduction). ✓ Sputum microscopy is the recommended method for diagnosing TB under the DOTS strategy. It identifies the most infectious cases of TB.
4. Role of the Laboratory	▪ Understand the structure and functions of a comprehensive TB laboratory system within the DOTS strategy ▪ Be able to identify the type of technical expertise which is needed in this area and where it can be ▪ obtained ▪ Have visited a laboratory and observed sputum smear preparation and mycobacterial culture ▪ processing ▪ Have examined a sputum smear under a microscope	✓ A comprehensive laboratory network must be in place for DOTS implementation. ✓ Adequate measures for quality assurance of laboratory services need to be carried out. ✓ Sputum microscopy is the recommended method for diagnosing TB under the DOTS strategy. It identifies the most infectious cases of TB.
5. Tuberculosis Treatment	▪ Understand the patient classification scheme ▪ Understand the basic TB regimens for the	✓ TB patients should be classified and treated according to WHO international guidelines.

	different categories of TB patients and how to monitor treatment ▪ Be aware of different models for delivering directly observed therapy (DOT) ▪ Have completed a patient treatment card	✓ TB is curable. However, treatment is complicated, requires DOT, and is for a minimum of 6 months. ✓ If patients do not take their medicines correctly or regularly, they will not convert their sputum to smear negative after 2 months of treatment and will not be cured at the end of treatment. Furthermore, taking TB drugs irregularly may lead to the development of drug resistance.
6. Managing TB Drugs and Supplies	▪ Understand the elements of drug supply and management—from national to facility and community levels—as they pertain to TB programs ▪ Have analyzed a real-life case study of problematic TB drug management ▪ Have considered options for PVOs/NGOs to link with other agencies for those elements of drug management that are beyond their capability	✓ It is essential to ensure an adequate supply of quality-assured TB drugs for all patients started on TB treatment. ✓ PVO's can have an important role in drug supply management at facility and district levels. ✓ National TB drug supply and management is complicated and, therefore, best handled by organizations with special skills in this area, e.g. governments, JSI, MSH. ✓ The Global Drug Facility provides free quality-assured TB drugs and monitors the use of these drugs.
7. Recording and Reporting/ Health Information System	▪ Understand standard DOTS recording and reporting forms and used them in exercises ▪ Be acquainted with tools and techniques (e.g. cohort analysis) to guide program management	✓ Standard WHO recording and reporting forms exist; their use by NTPs ensures consistency of TB data collected worldwide. ✓ Cohort analysis is at the heart of measuring program performance. Data from cohort analysis should lead directly to management action to identify the reasons for poor outcomes and corrective action to improve program performance.
8. Policy and Advocacy in TB Programming	▪ Have identified areas of the system where policy plays a role, and possible advocacy activities ▪ Have identified key policy players from an organizational overview of the NTP ▪ Recognize the role of TB program data in facilitating policy change	✓ Sustained political commitment to increase human and financial resources and make TB control a priority is key to long term TB control effectiveness. ✓ Changes in political commitment and policies take place as the result of a defined process of gathering data and using it to influence policy makers.
9. Introduction to Self Assessment and TB Project Design Project	▪ Have been introduced to the self-assessment tool which will be used throughout the course to guide project design planning. ▪ Have considered their various partners, target populations, and activities in preparation for	✓ Each organization should assess their competencies to identify potential areas of collaboration with the NTP.

	planning new or expanding current TB control activities. ▪ Will have begun preparing their TB project design, applying the key elements learned in this course	
10. Supporting Patients during Treatment: Directly Observed Therapy	▪ Appreciate the roles and responsibilities of a DOT treatment supporter ▪ Consider the advantages and disadvantages of different DOT delivery options from the health system and patient perspectives ▪ Understand the obstacles/barriers to patient treatment adherence and possible health system responses ▪ Understand the pros and cons to using incentives/enablers in TB control programs ▪ Recognize the potential incentive of communities to support TB patients in completing their treatment	✓ DOT can be provided by a variety of individuals and in a variety of settings. ✓ Patient-centered care (care responsive to a patient's social situation) is key to ensuring treatment completion. ✓ All DOT treatment supporters must be adequately trained and supervised in their duties to ensure delivery of high quality care. ✓ TB treatment adherence is the responsibility of the health system, not the patient. If adherence is poor, the health system must do something about it, not just blame the patient. ✓ Incentives and enablers may improve patient adherence to TB treatment. ✓ Community involvement can contribute to the success of TB control activities.
11. Supervision, Monitoring and Evaluation	▪ Understand the role of supervision in maintaining program quality ▪ Be able to select indicators from the Compendium of Indicators for Monitoring and Evaluating National TB Programs to evaluate a sample TB control program. ▪ Have completed a cohort analysis, interpreted the results, and developed possible management responses to problems identified. ▪ Recognize the value of documenting program interventions for policy-making/advocacy purposes as well as building the evidence base for effective programming	✓ Effective supervision, monitoring and evaluation are key activities for identifying program problems and ensuring quality is maintained. ✓ Standardized international indicators exist for monitoring and evaluating TB control program components. ✓ Innovative practices must be conducted within the DOTS strategy framework. ✓ Management Research can be used to help achieve TB program goals. ✓ Documentation of innovations is necessary to build an evidence base which allows you to advocate for change and attract funding.
12. Visit to a TB Clinic/Debriefing	▪ Have toured a TB clinic in the public sector ▪ Observed a provider-patient interaction ▪ Observed the use of patient treatment cards and the TB registry ▪ Witnessed facility-based DOT, if possible	✓ Based on debriefing

13. TB Control Partnerships: Global and Local	▪ Understand the typical NTP organizational structure and primary functions ▪ Be aware of other in-country TB control partners ▪ Be aware of global partners and initiatives, and their roles in TB control	✓ The NTP oversees all TB control activities in a country; therefore, all PVO TB control programming must be planned in close collaboration with the NTP. The NTP is the PVO's senior counterpart, even in situations where private sector entities are delivering large portions of TB services. ✓ Several global agencies are contributing to TB control and can offer opportunities for collaboration. ✓ PVOs should operate in partnerships.
14. Multiple Drug Resistant-TB	▪ Understand the differences in treatment between MDR-TB and drug-susceptible TB ▪ 2. Understand the distinctive set of skills needed to manage MDR-TB	✓ Managing MDR-TB is complicated and, therefore, requires specialized expertise and services. ✓ An effective DOTS program is the best means of preventing emerging drug resistance and must be in place before MDR-TB management is initiated.
15. Pediatric Tuberculosis	▪ Understand the differences between childhood and adult TB. ▪ Understand the difficulties in diagnosing and issues related to treating TB in children. ▪ Understand the importance of TB prophylaxis in contacts under the age of 5. ▪ Understand why pediatric TB has not been a focus of the DOTS strategy. ▪ Appreciate the role of BCG vaccination.	✓ Diagnosing TB is difficult in children. ✓ Since children are rarely infectious, pediatric TB has not been a priority of the DOTS strategy. ✓ BCG is effective at preventing disseminated forms of TB in children but not effective in preventing TB in adults.
16. Tuberculosis and HIV/AIDS	▪ Understand the important connection between the TB and HIV epidemics ▪ Understand the treatment issues for TB in HIV-infected individuals. ▪ Identify the need for collaboration between TB and HIV/AIDS control programs and how linkages can be achieved.	✓ TB and HIV epidemics are fueling one another. HIV is responsible for dramatic increases in TB rates in Sub-Saharan Africa. ✓ TB and HIV control and services should be linked. Close collaboration is necessary. ✓ TB is curable in HIV infected patients. However, TB treatment is more complicated when patients are on ARVs. ✓ INH prophylaxis is indicated for HIV-infected individuals with latent TB infection.
17. Role and Challenges of Private Sector in TB Control	▪ Be aware of the full scope of the private sector ▪ Understand the important role that the private sector plays in TB control activities ▪ Consider the consequences of a lack of collaboration between the NTP and the private	✓ The private sector can include a wide range of practitioners. ✓ Collaboration between the public and private sectors is necessary for effective TB control and achievement of global targets.

	sector ▪ Know of examples of successful interactions between NTPs and the private sector.	✓ Barriers to collaboration between the public and private sectors can exist on both sides and must be fully explored before undertaking a collaborative activity. ✓ Some countries have established guidelines for public-private collaboration.
18. Changing Tuberculosis Personnel Behavior	✓ Understand how we measure quality and performance of TB control activities ✓ Be able to list and compare strategies that can be used to improve TB control program quality and performance. ✓ Understand when training is (and is not) the most appropriate response to poor quality or performance	✓ Application of the full range of strategies to improve quality and effectiveness of services among TB control personnel is likely to be more effective and often less costly than standard training courses. ✓ The best interventions for improving quality and performance should be selected based on a needs assessment. ✓ Training is not the answer when lack of information or skill is not the problem. Training will not address other causes of poor performance such as inadequate working conditions, low morale, weak supervision, and insufficient compensation. ✓ All training needs follow up to increase the likelihood of implementation of the new knowledge.
19. TB Project Design Work Time	▪ Have identified all components of a project proposal and the key partners associated with each component. ▪ Have identified specific roles for their organization in the project design. ▪ Have drafted a new or revised TB control program and implementation plan	✓ Each organization should assess their competencies to identify potential areas of collaboration with the NTP.
20. Visit to Private Practitioner's Office	▪ Have toured a private practitioner's office. ▪ Observed a provider-patient interaction. ▪ Spoken with a private provider about pros and cons of collaboration with the NTP	✓ Based on debriefing

EVENING BEFORE COURSE BEGINS
Participants receive course notebook and additional background/reference materials.

Group Dinner and Welcome
Following dinner, welcoming remarks from course organizers.

Stories of TB – 30 minutes
Explain will now give the opportunity for participants to meet their fellow participants. Ask participants to find a partner at their table (someone not from their own organization), introduce themselves, and take two minutes to discuss:

- ***What has been your experience—past or present, personal (including family, friends, etc) or professional—with tuberculosis?***

After 5 minutes, invite participants to briefly share their stories.

Thank the volunteers for reporting and encourage all participants to continue this type of discussion and share their experiences throughout the course.

INTRODUCTION
Participants enter room and take seats. Use of assigned seating optional.

OBJECTIVES: By the end of this session, participants will have:
1. Reviewed the course agenda and format, including the use of take-home exams to accompany the reading assignments each evening.
2. Been introduced to the TB project design final project.
3. Reviewed the expectations for successful completion of the course.

PREPARATION:
TRAINER:
- Ice-breaker exercise
- Summary of course agenda and TB design project
- Description of expectations of participants

TIME: 60 minutes

STEPS:
1. Welcome by Coordinating Organization Representative – 5 minutes

2. Welcome and Icebreaker by Coordinating Organization Representative – 10 minutes

Ask the participants to move to one corner of the room based on their self-assignment of the categories presented. As appropriate to the setting and the group, choose a few of the following categories (or make up new ones). Start with a few general categories and then move to the TB specific categories. As the group divides itself, take a moment to discuss each outcome.

General
~Favorite food group: vegetable, fruit, meat, sweets, carbs.
~Birth order: Single child, oldest, middle, youngest.
~Distance/time traveled to this course.

TB related categories
~Length of time directly involved in TB control programming: None, Less than one year, One to five years, more than five years.

~Length of time directly involved in HIV/AIDS programming: None, Less than one year, One to five years, more than five years.

3. General Introduction of Participants and Facilitators – 10 minutes

Introduce the facilitators/trainers, credentials. If participants did not introduce themselves at dinner to entire group at the welcome dinner, then participants should introduce themselves now stating their name and organization (optional: and one personal objective for the course).

4. Course Format Overview – 10 minutes

Direct students to the course agenda. Walk participants through the agenda, explaining the careful selection of content, format of the course, with the overall objective being the ability to apply the knowledge gained to design a technically sound and well managed TB control project. Explain what

those projects will be and that they will be presented in detail at the end. Certificates will awarded to those who successfully complete a quality small group project.

Emphasize the following:

- There will be almost no lecturing. Sessions will be begin with a facilitated discussion based on the reading. Therefore, active reading of the homework assignments is required.
- There will not be a standard pre- and post-test used. There will be sets of questions associated with the topic each night which will be collected the following morning. These questions should be used to guide participants' reading and comprehension of the material as they will stress the main points of the topic.
- The final activity will be a group presentation of a TB project design appropriate for the location selected by the participants. Each member of the small group is responsible for doing a portion of the presentation.
- A self-assessment tool has been created to help participants prepare for the project design final project.
- Asking questions at any point is encouraged. If time does not permit all questions to be addressed immediately, participants are encouraged to approach facilitators during breaks, mealtimes and evenings.
- Your thoughtful and detailed evaluation of the course, and your suggestions for improvement, will be appreciated. At the end of each day participants will spend a few minutes completing evaluation forms and ultimately fill out a final evaluation form.
- Receipt of a certificate of attendance requires ALL of the following: 1) all sessions are attended in full, 2) participation during class sessions, 3) participation on the project design preparation, 4) participation on the project design presentation, and 5) completion of course evaluation forms.

Course logistics. – 5 minutes

- Starting, ending and break times, travel to site visits/other logistics related to site visits.
- Breaks and meals.
- Accommodations, phone, computer, etc, as applicable

Pre-test – 20 minutes

- Distribute the pre-test and allow participants 20 minutes to complete.
- Collect test and explain correct answers will be provided at the end of the week.

SESSION #1: TUBERCULOSIS—THE PATIENT, DISEASE AND THE DOTS STRATEGY

OBJECTIVES: By the end of this session, participants will:
1. Understand how TB is transmitted and its pathogenesis.
2. Be familiar with the DOTS strategy, the internationally recommended strategy for TB control.

PREPARATION
TRAINER
- Mr. TB Germ video, set up
- Prepare for facilitated discussion(s)
- Prepare 2-3 slides of chest x-rays with cavitary lesions and healing
- Key messages listed on a flip chart

PARTICIPANT
- Read Session #1 Readings in notebook

TIME: 45 minutes

STEPS:

1. Review the pathogenesis and transmission of TB – 20 minutes

View Mr. TB Germ video.
Ask:
- ***Did you learn anything from the video? What did you learn?***
- ***What remains unclear about the pathogenesis of TB?***

- Explain latent TB infection vs. active disease (primary infection vs. re-activation).
- Explain that most TB disease in high TB incidence countries is due to recent and repeated re-infection.
- Show 2-3 slides of chest x-rays with extensive cavitary disease and the response to treatment with gradual clearing of the cavity. Explain the relationship between cavitary disease and the presence of TB bacteria in the sputum.

2. Controlling TB: Discussion of the DOTS strategy – 15 minutes

Ask:
- ***What are the 5 components of the DOTS strategy?***
- ***Why is each necessary for effective TB control?***

Emphasize:
- DOTS is based on data-Dr. Styblo demonstrated cure rates improved from ~30% to over 80%.
- DOTS targets infectious adult TB cases.
- This is an ALL or NONE package.
- Explain this is the approach used throughout the world, including in resource-rich countries.

3. Close the session – 10 minutes

Ask:
- What do you think are the key messages from this session?

List the responses from the participants on a flip chart. Then read the prepared the flipchart of Key Messages. Compare the perceived and intended key messages.

KEY MESSAGES:

- ✓ **TB is primarily spread through airborne transmission to those in close contact (e.g., shared living space) with an untreated TB patient when s/he coughs TB bacteria into the air.**
- ✓ **The DOTS strategy, which targets infectious adults TB cases, has become the internationally accepted approach to controlling TB worldwide.**

Answer any remaining questions on the pathogenesis and transmission of TB and the DOTS strategy.

SESSION #2: TB AS A GLOBAL HEALTH CRISIS

OBJECTIVES: By the end of this session, participants will:
1. Understand the current global epidemiology of tuberculosis
2. Have discussed why the global health crisis exists

PREPARATION
TRAINER
- Tuberculosis in the World video, set up.
- Prepare for facilitated discussion(s)
- Key messages on a flip chart

PARTICIPANT
- Read Session #2 Readings in notebook

TIME: 45 minutes

STEPS
1. **Video: Tuberculosis in the World (IUATLD) – 15 minutes**

2. **Discussion of why TB is a global crisis – 20 minutes**
   Ask:
   - ***Can you summarize/list the contributing factors that have resulted in TB emerging as a global crisis?***

     Record responses on a flip chart. Ensure that the list includes the following:
     - HIV/AIDS epidemic
     - Poorly managed TB control programs in the past (pre-DOTS era)
     - Poverty which has resulted in overcrowded living conditions, poor work environments, poor nutrition
     - The emergence of drug resistance/MDR-TB
     - Inadequate health services infrastructure/poor access and/or utilization
     - Insufficient funds devoted to TB control activities

   - ***In the regions/countries where you have worked, what are the key factors that have led to the TB crisis? (mark those that are locally relevant) How have they affected TB control efforts?***

3. **Close the session – 10 minutes**
   Ask:
   - What do you think are the key messages from this session?

   List the responses from the participants on a flip chart. Then read the prepared the flipchart of Key Messages. Compare the perceived and intended key messages.

KEY MESSAGES
- ✓ **Many different factors—poorly managed TB control programs in the past, the HIV epidemic, poverty—have led to an increase in TB worldwide, resulting in a global crisis.**

Answer any remaining questions on the global TB crisis.

SESSION #3: TUBERCULOSIS CASE DETECTION AND DIAGNOSIS

OBJECTIVES: By the end of this session participants will:
1. Understand the global case detection goal and the rationale for passive case finding under DOTS
2. Have identified barriers to case detection and interventions to improve the case detection rate
3. Know why sputum microscopy is the recommended diagnostic method for DOTS over other methods.
4. Understand the overall TB diagnostic algorithm

PREPARATION:
TRAINER
- Prepare matrix of diagnostic methods (including characteristics such as sensitivity, specificity, cost, availability in resource-poor countries, time to results)
- Prepare for facilitated discussion(s)
- Case Detection Flow Diagram
- Diagnostic algorithm (slide) with blanks to fill in
- Key messages on a flip chart

PARTICIPANT
- Read Session #3 Readings in notebook

TIME: 1 hour

STEPS

1. Discussion of Case Detection – 20 minutes

- Introduce the definition and rationale for the 70% case detection goal.
- Specify that treatment success rates must be at 85% or above before active case finding is appropriate.
- Mention that case detection worldwide is low—on average only 37% of estimated smear positive cases are detected.

Split the room in half to address the two following questions which refer to the Case Detection Flow Diagram. Give the participants 5 minutes to discuss and prepare. Record responses on a flip chart.

Ask:

➢ ***What are some potential barriers to seeking (or utilizing) care for TB patients?***

The list of barriers should include:
- lack of knowledge of symptoms,
- lack of awareness of available services,
- transportation issues,
- time involved (including return visits for sputums),
- potential costs for diagnostic services,
- stigma.

Mention that once a patient has sought care, poor or negative interactions with the health care system can produce further barriers.

Ask:

➢ ***What interventions might be implemented to improve case detection?***

The list of interventions should include

- strengthening knowledge at community level about TB symptoms and appropriate care seeking
- strengthening knowledge among clinicians about identification of a TB suspect (typically a person that presents to a health facility with cough for 3 weeks or more, with or without other symptoms suggestive of TB)
- ensure incorrect application of the diagnostic algorithm for TB suspects
- strengthen knowledge about mechanisms for referral
- institute a system to retrieve TB suspects who are found to be smear positive and don't return to start treatment
- assist providers in being responsive, informed, and non-discriminatory in their practices

Note that many of these interventions can and have been implemented by NGOs.

If possible, include information about case detection activities in the country where the course is being held.

2. Discussion of sputum smear microscopy – 15 minutes

Ask:

- ***Why do you think microscopy was selected as the preferred diagnostic method?***

Record responses on a flip chart. Add any from the following list if not mentioned.

- Sputum microscopy identifies those patients that are most infectious
- Low cost relative to other diagnostic methods.
- Comparative practicality in situations of low resources – much less difficult and sensitive to variation in temperature, able to perform in setting without electricity, etc
- Fast turnaround time for results
- It is a very specific test

Reinforce that smear microscopy is the standard for DOTS for the following reasons:

- its practicality in low income settings
- it identifies those cases that are most infectious and therefore, the highest priority for treatment.
- Successful treatment of smear positive TB cases will lead to a decrease in TB transmission and the eventually the incidence of TB.

Do note that smear negative pulmonary TB cases and extrapulmonary TB cases (which are usually smear negative) must also be treated.

3. Process of Diagnosis – 15 minutes

Show a simplified version of WHO's diagnostic algorithm with blank boxes. Ask participants to fill in the blank boxes and discuss the basic rationale for each step. Discuss the role of chest x-ray, culture and clinical judgment—emphasize that these enter the algorithm when smear microscopy results are inconclusive.

4. Close the session – 10 minutes

Ask:

- What do you think are the key messages from this session?

List the responses from the participants on a flip chart. Then read the prepared the flipchart of Key Messages. Compare the perceived and intended key messages.

KEY MESSAGES:

- ✓ **The international target for case detection of smear positive TB cases is 70%.**
- ✓ **Treatment success rates must be at 85% or above before active case finding is appropriate.**
- ✓ **The process from the first sign of symptoms to a definitive diagnosis of TB is complex; errors and drop-outs can occur at all stages of this process.**
- ✓ **NGOs can play a role in improving case detection by finding ways to reduce barriers to care seeking (e.g., stigma reduction).**
- ✓ **Sputum microscopy is the recommended method for diagnosing TB under the DOTS strategy. It identifies the most infectious cases of TB.**

Answer remaining questions on case detection and diagnosis of TB under DOTS.

SESSION #4: ROLE OF LABORATORY

OBJECTIVES: By the end of this session participants will:
1. Understand the structure and functions of a comprehensive TB laboratory system within the DOTS strategy
2. Be able to identify the type of technical expertise which is needed in this area and where it can be obtained
3. Have visited a laboratory and observed sputum smear preparation and mycobacterial culture processing
4. Have examined a sputum smear under a microscope

PREPARATION:

TRAINER
- Prepare for facilitated discussion(s)
- Prepare handout on possible errors with sputum smear microscopy
- Arrange visits to a smear microscopy center and a regional (intermediate) or national reference laboratory where cultures processing can be observed.
- Key messages on a flip chart to review at end or to hand out on return back to course site

PARTICIPANT
- Read Session #4 Readings in notebook

TIME: 25 minutes (in class) / 3 hours (field visit)

STEPS

1. Overview of laboratory system – 20 minutes

Ask participants:
- ***What are the components of a comprehensive TB laboratory system?***
- ***What are the components of a Quality Assurance System?***
  - Use of quality control slides (internal quality control)
  - Proficiency testing
  - External quality control

Discuss arrangements/logistics for laboratory visits, what participants can expect from the visits.

2. Close the session – 5 minutes

Ask:
- What do you think are the key messages from this session?

List the responses from the participants on a flip chart or on a hand out. Then read the prepared list of Key Messages. Compare the perceived and intended key messages.

KEY MESSAGES:
- ✓ **A comprehensive laboratory network must be in place for DOTS implementation.**
- ✓ **Adequate measures for quality assurance of laboratory services need to be carried out.**
- ✓ **Sputum microscopy is the recommended method for diagnosing TB under the DOTS strategy. It identifies the most infectious cases of TB.**

3. Depart for the laboratory visits: smear microscopy center – 1.5 hours

Tour of facility and walk-through of sputum smear processing.

At the smear microscopy center, distribute the list of potential errors that can occur (or identify them as part of tour or ask participants to provide an error and a corrective action at the same time). Ask:

- ***What are possible corrective actions or mechanisms that can be put into place to lessen or prevent these errors in sputum smear microscopy from occurring?***

Add any from the list below that the teams do not provide. Stress the importance of care and supervision.

Possible Mistakes in TB Microscopy	Possible Solutions (examples)
▪ Reading only 1 slide for the patient and not 3 as outlined in the standard protocol ▪ Poor or damaged microscope ▪ Inadequate light source, electricity failure ▪ Lack of or poor quality (e.g., outdated) reagents for staining the AFB smears ▪ Re-using slides and getting false positive results ▪ Failure to review 100 fields and therefore miss rare organisms (may occur with high volume of slides) ▪ Low volume of slides resulting in deterioration of slide reading skills ▪ Inadequate specimen (saliva) ▪ Poor staining technique (but is pretty simple procedure)	▪ Review protocols with staff, training, continuous monitoring ▪ Advocate for working microscopes ▪ Institute quality control practices for supplies ▪ Advocate for adequate supply of new slides to prevent re-using ▪ Ensure adherence to quality assurance program

3. If time and scheduling allows, visit a regional or national reference laboratory – 1.5 hours
Tour of facility and walk-through of sputum processing for culture.

SESSION #5: TUBERCULOSIS TREATMENT

OBJECTIVES: By the end of this session, participants will:
1. Understand the patient classification scheme
2. Understand the basic TB regimens for the different categories of TB patients and how to monitor treatment
3. Be aware of different models for delivering directly observed therapy (DOT)
4. Have completed a patient treatment card

PREPARATION:
TRAINER
- Prepare for facilitated discussion(s)
- Patient cases to be classified
- Treatment cards and data
- Key messages listed on flip chart

PARTICIPANT
- Read Session #5 Readings in notebook

TIME: **60 minutes**

STEPS:
1. **Patient classification system – 15 minutes**
   Ask:
   - ***What are the criteria used to assign patients to different categories?***
     - Site of disease (pulmonary versus extrapulmonary)
     - Bacteriology (result of sputum smear)
     - Severity of TB disease (based on bacillary load, extent and site)
     - History of previous TB treatment enables to classify as new or retreatment (relapse, treatment after failure, treatment after default)

2. **TB treatment – 20 minutes**
   Begin by emphasizing that curing TB patients is key to TB control efforts—curing patients, which will halt the spread of TB, is what all the other activities support. The numbers of successfully cured patients is how TB control programming is evaluated—which will be discussed in greater detail in a future session.
   Ask:
   - ***What are the 5 first-line drugs and their short-hand notation? (as each is listed, mention the role of each drug)***
   - ***What is the regimen most commonly used to treat smear positive TB patients?***

   Refer participants to the table in the WHO treatment guidelines. Include duration of each phase.
   - ***How are TB patients on treatment monitored?***

   The list should include monitoring by clinician for side-effects and sputum smear at the end of the initial phase and end of treatment. Mention the consequences of incomplete treatment. Define the six possible mutually-exclusive treatment outcomes.

   Show list of most common side-effects for each drug. Mention that clinicians need to monitor patients on TB treatment for these side effects on a regular basis and adjust regimen as necessary. Explain how the monitoring is performed (e.g., question screens and in some cases routine lab tests).

Ask:

- ***Why is DOT a part of the DOTS strategy?***

Ensure responses include the following:

- Ensures treatment adherence.
- Can facilitate detection of side-effects
- Can provide support to patient
- Reduces the risk of developing drug resistance

If possible, include information about the treatment regimens and DOT practices in the country where the course is being held.

3. Fill out treatment card using a sample form – 15 minutes

Give each participant 2 blank TB treatment cards and patient case data. Ask them to complete the cards using the case information. Alternatively, show (or handout) a correctly completed card and discuss.

4. Close the session - 10 minutes

Ask:

- What do you think are the key messages from this session?

List the responses from the participants on a flip chart. Then read the prepared the flipchart of Key Messages. Compare the perceived and intended key messages.

KEY MESSAGES:

- ✓ **TB patients should be classified and treated according to WHO international guidelines.**
- ✓ **TB is curable. However, treatment is complicated, requires DOT, and is for a minimum of 6 months.**
- ✓ **If patients do not take their medicines correctly or regularly, they will not convert their sputum to smear negative after 2 months of treatment and will not be cured at the end of treatment. Furthermore, taking TB drugs irregularly may lead to the development of drug resistance.**

Answer any remaining questions about TB Treatment.

SESSION #6: MANAGING TB DRUGS AND SUPPLIES

OBJECTIVES: By the end of this session, participants will:
1. Understand the elements of drug supply and management—from national to facility and community levels—as they pertain to TB programs
2. Have analyzed a real-life case study of problematic TB drug management
3. Have considered options for PVOs/NGOs to link with other agencies for those elements of drug management that are beyond their capability

PREPARATION

TRAINER
- Prepare for facilitated discussion(s)
- Case Study on TB drug management (TB Manager insert) and answers for distribution at the end of the session.
- Key messages listed on flipchart

PARTICIPANT
- Read session #6 Readings in notebook

TIME: 60 minutes

STEPS:

1. Discussion of key elements of a drug management system – 15 minutes

Ask:
- ***What are the four activities of the drug management cycle? What does each entail?***
  - Selection of essential drugs
  - Procurement of selected drugs
  - Distribution of procured drugs
  - Use of distributed drugs

Have blank diagram of the drug management cycle (TB Manager, pg 5) which can be filled in, including the center circle with "Management Support" and the outer circle with "Policy and Legal Framework". Emphasize that TB drug management requires that the medications for a full course of therapy need to be set aside for every TB patient at the start treatment.

2. Case Study – 20 minutes

Participants work in small groups to discuss a case study (or case studies). Each group should spend 5-10 minutes discussing and recording their responses to the following questions for each case study:

- ***What critical aspects of drug supply management are threatened in this case study?***
- ***What might you do about this problem?***
- ***Are there any advantages to the drug management system described in this scenario?***

Ask small groups for their responses to the above questions for each case. List the responses for each case on flip charts. Summarize the highlights of the case study discussion.

3. Roles in drug supply management for PVOs and specialized organizations– 15 minutes

Remind the participants that most countries have a national drug supply system established.
Ask:
- ***What are appropriate options for PVOs/NGOs involvement with the drug supply system as part of DOTS?***

Responses should include the following:

- monitoring inventory management, drug stocks, and supply continuity at facility and district level
- training of facility staff in inventory management
- facilitating higher level technical assistance to national or provincial managers by expert agency
- advocating for allocation of funds for drugs when necessary (e.g., this is sometimes needed especially in decentralized settings)
- Linking NTP with drug donors

Ask someone to describe the purpose of the Global Drug Facility: a procurement service managed by the Stop TB Partnership that provides quality-assured TB drugs to NTPs at low or no cost. Distribution and use of GDF-supplied drugs is monitored by a technical team.

If possible, include information about the TB drug management system in the country where the course is being held.

4. Close the session - 10 minutes

Ask:

- What do you think are the key messages from this session?

List the responses from the participants on a flip chart. Then read the prepared the flipchart of Key Messages. Compare the perceived and intended key messages.

KEY MESSAGES:

- ✓ **It is essential to ensure an adequate supply of quality-assured TB drugs for all patients started on TB treatment.**
- ✓ **PVO's can have an important role in drug supply management at facility and district levels.**
- ✓ **National TB drug supply and management is complicated and, therefore, best handled by organizations with special skills in this area, e.g. governments, JSI, MSH.**
- ✓ **The Global Drug Facility provides free quality-assured TB drugs and monitors the use of these drugs.**

Answer any remaining questions about managing TB drug supplies.

SESSION #7: RECORDING & REPORTING

OBJECTIVES: By the end of this session, participants will:
1. Understand standard DOTS recording and reporting forms and used them in exercises
2. Be acquainted with tools and techniques (e.g. cohort analysis) to guide program management

PREPARATION:
TRAINER
- Prepare for facilitated discussion(s)
- Treatment cards, treatment outcome forms and district blurbs to be used for cohort analysis exercise
- Key messages listed on flip chart

PARTICIPANT
- Read session #7 Readings in notebook

TIME: 60 minutes

STEPS:

1. Discussion of the Recording and Reporting System – 25 minutes

Ask:
- ***What are the advantages to the WHO recording and reporting system for TB control?***
- ***What are the disadvantages to this system?***

Show copies of the WHO forms and discuss their purpose. Mention the example of the difficulties obtaining data from private practitioners. If possible, use forms from the country in which the course is being held.

2. Cohort Analysis homework assignment – 25 minutes

Hand out to each participant a packet of 4 treatment cards, a blurb about their "district" and a blank treatment outcome form. Explain that they are to review the cards and fill out the treatment outcome form now for their cohort of patients. Each participant should submit their "district" data to the small group member who agrees to be the regional coordinator. This person should compile the data for the entire "region" (small group) of 5 districts (participants). As homework, each small group should review their regional cohort analysis data and plan a management response to the problems identified. Groups will share their cohort analysis results and program responses the following day.

3. Key Messages – 10 minutes

Ask:
- What do you think are the key messages from this session?

List the responses from the participants on a flip chart. Then read the prepared the flipchart of Key Messages. Compare the perceived and intended key messages.

KEY MESSAGES:

- ✓ **Standard WHO recording and reporting forms exist; their use by NTPs ensures consistency of TB data collected worldwide.**
- ✓ **Cohort analysis is at the heart of measuring program performance. Data from cohort analysis should lead directly to management action to identify the reasons for poor outcomes and corrective action to improve program performance.**

Ask for and answer any questions about managing TB Recording and Reporting System.

SESSION #8: POLICY AND ADVOCACY IN TB PROGRAMMING

OBJECTIVES: By the end of this session, participants will:
1. Have identified areas of the system where policy plays a role, and possible advocacy activities
2. Have identified key policy players from an organizational overview of the NTP
3. Recognize the role of TB program data in facilitating policy change

PREPARATION:
TRAINER
- Prepare for facilitated discussion(s)
- Case study of advocacy for a change in policy regarding TB control
- Key messages listed on flip chart

PARTICIPANT
- Read session #8 readings in notebook

TIME: 60 minutes

STEPS:

1. Discussion of policy and advocacy - 30 minutes

Ask:
- ***Why is policy and advocacy work important to TB control?***
- ***Can you provide some examples from your work experience where policy and advocacy work has been beneficial (or detrimental) to your TB control programming?***

3. Discussion of a Case Example or Problem Solving Exercise where particapnts ar given an example of a policy that needs to be changes and asked to come up with ways to advocate for change – 20 minutes

Ask:
- ***What was the policy change in this case study and how did it affect the work of the NTP?***
- ***Why do you think the advocacy efforts were successful?***
- ***How did the government demonstrate its political commitment to TB control?***

Emphasize the following points about the process by which policy was changed, typically including:
- policy assessment report showing differences between current and needed policies
- analytical studies and reports presented to decision makers showing implications (i.e., economic, health status, political) of continuing current policy and the benefits of a changed policy.
- public dissemination of information to produce political support
- operations research if appropriate to study the effect of altered policy or methods on cost or effectiveness of services as well as attitudes and reactions of health sector personnel and the public.

If possible, include information about TB advocacy efforts in the country where the course is being held.

3. Close the session by highlighting the key messages – 10 minutes

Ask:
- What do you think are the key messages from this session?

List the responses from the participants on a flip chart. Then read the prepared the flipchart of Key Messages. Compare the perceived and intended key messages.

KEY MESSAGES:

- ✓ **Sustained political commitment to increase human and financial resources and make TB control a priority is key to long term TB control effectiveness.**
- ✓ **Changes in political commitment and policies take place as the result of a defined process of gathering data and using it to influence policy makers.**

Ask for and answer any questions about TB policy and advocacy.

SESSION #9: INTRODUCTION TO TUBERCULOSIS PROJECT DESIGN

OBJECTIVES: By the end of this session, participants will:
1. Have been introduced to the self-assessment tool which will be used throughout the course to guide project design planning.
2. Have considered their various partners, target populations, and activities in preparation for planning new or expanding current TB control activities.
3. Will have begun preparing their TB project design, applying the key elements learned in this course

PREPARATION:
TRAINER
- Flip charts for participants to complete (self-assessment exercise #1)
- Post-it notes for each organization
- Project design template
- Key messages listed on a flip chart

PARTICIPANT
- Select country and bring NTP plan
- Completed self-assessment worksheet tool
- Contacted your HQ/Regional office to answer additional questions, as needed
- Created reasonable answers where no information was available (so as to complete the exercise).

TIME: 45 minutes

STEPS:

1. Introduce the TB Response Self-Assessment process – 5 minutes

Remind participants that as a result of the course they will be in a better position to respond to the TB epidemic in their country programs.

Explain the self-assessment tool will be used throughout the workshop (see Appendix 1 for complete self-assessment tool). Inform participants that the self-assessment tool can be completed during the TB project design work time to guide planning for the final project design and implementation exercise. The first self-assessment exercise will be done now together.

2. Self-assessment Exercise #1 – 20 minutes

Post the two flipchart grids and explain that these list 1) possible populations at risk for TB and 2) potential partner agencies or individuals that participate in TB control. As part of planning a TB control project, PVOs should consider and assess their linkages to these groups.

Ask the participants to consider their organization's current activities and collaborative relationships relative to the kinds of activities and partnerships needed in tuberculosis control programming.

- ***Who are the population groups you serve and the partners with whom you work?***

Give participants from each organization a set of post-its that they can stick in the appropriate boxes. For example, if an organization works with intravenous drug users then they should put a post-it under the organization's column in the row labeled "intravenous drug users". Add any high-risk groups not mentioned.

POPULATIONS AND PARTNERS WITH WHOM YOU WORK											
Groups / Individuals Served	**Name of PVO / NGO**										
▪ Intravenous drug users											
▪ HIV/AIDS infected and affected people											
▪ Populations at high risk for HIV infection (e.g., commercial sex workers)											
▪ Marginalized ethnic minorities											
▪ Poor families											
Partner Organizations / Groups											
▪ Community Health Workers											
▪ Clinics											
▪ Hospitals											
▪ Private sector providers											
▪ Laboratory staff											
▪ Ministry of Health											
▪ Ministry of Finance											
▪ National Tuberculosis Program											
▪ WHO											
▪ Local PVOs/NGOs											
▪ International PVOs/NGOs											

➢ ***What are the activities that your organization undertakes?***

Post the second flipchart and repeat the process. For example, if an organization carries out training and supervision of community health workers, they should put a post-it under the organization's column in the row labeled "training and supervision of community health workers". Add any agencies, organizations or individuals not mentioned.

ACTIVITIES											
	Name of PVO / NGO										
▪ Training of heath care personnel											
▪ Training of laboratory technicians											
▪ Training and supervision of community health workers											
▪ Community or home-based care											
▪ Advocacy/policy development											
▪ Community health education and promotion of health seeking behaviors											
▪ Capacity building in supervision and management skills											
▪ Capacity building in monitoring and evaluation											
▪ Drug supply management at facility level											
▪ Health information system support and improvement											

▪ HIV care and treatment programs											
▪ Provider counseling/quality of care programs											
▪ Stigma reduction activities											
▪ Health system management											
▪ Capacity development in health system management											
▪ Operational research											

3. TB project design preparation – 20 minutes

Participants work in assigned small groups (those from the same organization will always work together and each small group should have ~4 participants so some may represent 2-3 organizations). Facilitators will sit with their assigned small group to answer any questions, provide any needed guidance. Groups should work fairly independently using the facilitator only as a consultant only and not as a group participant or leader. Facilitators should be prepared to "listen in" to their groups and interject only when necessary.

Template will include the following headings:

- Epidemiology and situational analysis
- Vulnerable groups
- Evidence of political commitment
- Laboratory services (including QA)
- DOTS coverage
- What others are doing in related areas (geographic and programmatic)
- Current problems

Participants should review the NTP documents and available data. Compare self-assessment worksheet with current NTP and identify areas for programming.

Describe why your PVO should get involved:

- What experience do you have?
- What niche can/do you fill?
- What partnerships can you build on?

Draft proposed TB control activities and implementation plan

Begin preparation on the draft of your organization's proposed activities and an implementation plan.

4. End the session by reading the Key Message from a flip chart:

KEY MESSAGE:

- ✓ **Each organization should assess their competencies to identify potential areas of collaboration with the NTP.**

SESSION #10: SUPPORTING PATIENT ADHERENCE WITH DOT AND COMMUNITY-LEVEL PROGRAMMING

OBJECTIVES: By the end of this session, participants will:
1. Appreciate the roles and responsibilities of a DOT treatment supporter
2. Consider the advantages and disadvantages of different DOT delivery options from the health system and patient perspectives
3. Understand the obstacles/barriers to patient treatment adherence and possible health system responses
4. Understand the pros and cons to using incentives/enablers in TB control programs
5. Recognize the potential incentive of communities to support TB patients in completing their treatment

PREPARATION:
TRAINER
- Prepare for facilitated discussion(s)
- Handout of patient treatment flow diagram
- Five case studies of different DOT models in various settings
- Handout for participants to list disadvantages and advantages of each model of DOT
- CARE India video, set up
- Key messages listed on a flipchart

PARTICIPANT
- Read Session #10 readings in notebook with questions
- Complete the handouts by listing advantages and disadvantages of each model of DOT described in the case studies.

TIME: 2 hours

STEPS:
1. **Discussion of Delivering Supportive DOT– 30 minutes**
   Remind participants that TB treatment is complicated and long, therefore, support to ensure adherence is needed. Mention that poor treatment adherence can lead to patient relapse, continued transmission in the community, and the emergence of drug resistance.

   Ask:
   - ***What are the roles and responsibilities of a DOT treatment supporter?***

   List should include the following:
   - Serve as a bridge between patient and health facility
   - Administer medications
   - Maintain patient TB treatment card
   - Collect Anti-TB drugs
   - Ensure adherence
   - Provide education
   - Identify suspects
   - Conduct follow-up and make referrals

   Ask:
   - ***What are some examples of DOT treatment supporters and settings?***
   - health care worker vs. trained layperson as treatment supporter
   - daily vs. 3x/week
   - facility-based vs. home- or community-based

Ask participants to read their responses on the handouts listing the advantages and disadvantages of each model of DOT described in the case studies. Compile all responses in a master list for each model using flip charts.

Case Study # ___		**DOT Model_____**	
Provider		**Patient**	
Advantages	Disadvantages	Advantages	Disadvantages
▪ ▪	▪ ▪	▪ ▪	▪ ▪

The facilitator should draw conclusions from the audience about the differences between the various models of providing DOT. The conclusions should include the following points in general:

- bringing DOT closer to patients may be necessary in situations where travel to health facilities is difficult
- complex family dynamics may prevent family members from ensuring that the patient is adherent
- incentives for the patient (as well as providers) can improve adherence (thereby reducing treatment interruption and treatment failure)
- regardless of the model, TB treatment supporters must be properly trained and supervised

If possible, include information about the DOT practices in the country where the course is being held (if not already covered during Session #5: TB Treatment).

2. Discussion about patient-centered care – 20 minutes

Refer participants to the treatment flow diagram. Split the room in half and ask one side to address each question:

- ***Why might a patient's sputum not convert to smear negative after two months of treatment?***

List responses on a flipchart. Ensure that the following are included.

- non-adherence (if DOT not provided)
- lack of drugs at facility
- poor quality of drugs
- poor adherence with ineffective DOT
- false positive result due to poor quality of smear (issues raised in previous session)
- drug resistance

- ***What practices could the health system implement that might make it easier for patients to adhere to therapy?***

List on a flipchart the ideas generated by the groups. Invite the group to comment on the list. Ensure that the list includes:

- conveniently located DOT (i.e., community- or home-based DOT)
- use of meaningful incentives and/or enablers such as food so that, for example, the sick patient (father) doesn't have to go looking for work rather than getting his treatment
- other means of social assistance and accessing of social services.

Emphasize it is the clinician that is ultimately responsible for the care of the patient and for ensuring that treatment is completed. In some cases, the health system has provided incentives to clinicians to support their good care.

3. Discuss incentive and enabler options for providers and patients – 25 minutes

Ask:

- ***What kinds of incentives and enablers are used in the TB control programs your country settings?***

List on a flipchart the various options mentioned by the participants. Add others to include all types currently known, including food and World Food Program or other partnerships, monetary incentives for providers increasing as patient nears completion and demonstration of cure, transportation reimbursements, store and other venue vouchers, and social support in obtaining work. Distribute the compiled list to participants at the end of the session/day.

- ***Are incentives and enablers necessary and defensible as critical components of a program which should be financed by the host government?***

Split the room into two groups and allow them to debate this issue for 5 minutes. List the pros and cons on a flip chart. After 5 minutes, present briefly the tension between governments and donors regarding incentives being extravagant luxuries, or corrupting components, rather than critical elements. Explain that management research may be necessary to obtain the data needed to show whether incentives are essential. Mention that there are successful TB programs that use incentives (e.g., Cambodia) and those that don't (e.g., Tanzania—has treatment success rate of 81%).

If possible, include information about the use of incentive and/or enablers in the country where the course is being held

4. CARE India video on community involvement – 15 minutes

Show video by CARE India. Ask for comments on the video; stress main messages as a segue to community involvement and awareness discussion.

5. Prepare a list of basic information for community awareness – 20 minutes

Ask:

- ***What do community members need to know about TB?***

Give the small groups 5 minutes to make a list of at least 5 points. Record the ideas on a flipchart. Rotate among all of the small groups until all of their ideas are listed. Ensure that the items on the list below are included.

Community Awareness Information
▪ TB can be cured ▪ Medications are free ▪ Assuring that patients are cured is important for the community ▪ Symptoms of TB ▪ How TB is transmitted from a patient to a healthy person

Ask:

- ***How can community awareness contribute to improved TB control efforts?***

Responses should include:

- Can lead to early identification of TB patients which will lead to decreased transmission in community

- Can improve case detection (reminder that this is only advised when high treatment success rates achieved)
- Can lead to improved treatment completion through support of community

6. Close the session – 10 minutes

Ask:

- What do you think are the key messages from this session?

List the responses from the participants on a flip chart. Then read the prepared the flipchart of Key Messages. Compare the perceived and intended key messages.

KEY MESSAGES:

- ✓ **DOT can be provided by a variety of individuals and in a variety of settings.**
- ✓ **Patient-centered care (care responsive to a patient's social situation) is key to ensuring treatment completion.**
- ✓ **All DOT treatment supporters must be adequately trained and supervised in their duties to ensure delivery of high quality care.**
- ✓ **TB treatment adherence is the responsibility of the health system, not the patient. If adherence is poor, the health system must do something about it, not just blame the patient.**
- ✓ **Incentives and enablers may improve patient adherence to TB treatment.**
- ✓ **Community involvement can contribute to the success of TB control activities.**

Answer any remaining questions about supporting TB patients during treatment, DOT, and community-level programming.

SESSION #11: SUPERVISION, MONITORING AND EVALUTION

OBJECTIVES:
By the end of this session, participants will:
1. Understand the role of supervision in maintaining program quality
2. Be able to select indicators from the Compendium of Indicators for Monitoring and Evaluating National TB Programs to evaluate a sample TB control program.
3. Have completed a cohort analysis, interpreted the results, and developed possible management responses to problems identified.
4. Recognize the value of documenting program interventions for policy-making/advocacy purposes as well as building the evidence base for effective programming

PREPARATION:
TRAINER
- Prepare facilitated discussion(s)
- Project HOPE quality checklists
- Treatment cards, TB Register pages and correctly completed treatment outcome form to be used for cohort analysis exercise
- Sample TB program scenario and copies of the Compendium
- Key messages listed on a flip chart

PARTICIPANT
- Read session #11 Readings in notebook

TIME: 75 minutes

STEPS:
1. **Discuss use of supervision to ensure quality – 20 minutes**
   Ask:
   - ***What should supervisors observe/do to maintain quality management of the program when visiting a health facility or TB laboratory?***

   List responses on flipchart.

   Distribute the Project HOPE checklists for the following 4 areas of TB control programming: 1) lab, 2) treatment including DOT, 3) Recording and Reporting, and 4) drug distribution and management). Compare and contrast the items on the lists generated in class and on the checklists.

   Discuss role of PVO in monitoring and supervision of counterpart NTP staff – transition from PVO carrying out functions to indigenous staff carrying them out, initially with mentoring.

2. **Monitoring and evaluation of TB programs—using the Compendium of Indicators – 25 minutes**
   Ask:
   - ***Why is monitoring and evaluation of TB programs important?***

   Responses should include:
   - Provides the information needed for strategic planning, program design and implementation
   - Allows informed decision-making about human and financial resources
   - Provides information about whether the program is on track to meet its stated objectives
   - Can provide information about corrective action needed or point to where further investigation is needed to determine this

Introduce the Compendium of Indicators including the definition and purpose of M&E. Ask the participants to work in their small groups and spend 10 minutes selecting 2-3 appropriate indicators from the Compendium for their case study.

Ask each group to present their list of selected indicators and state why they chose each one. Discuss appropriateness of the selections presented.

3. Discussion of Management Research – 20 minutes

Ask:

- ***How would you define management research?***

Basic definition: deciding to get more data to characterize or solve a management problem.

- ***Why is management research critical to TB control programming?***

Management research in this mode allows managers to make management decisions based on data and evidence, rather than based on anecdotal experience. Explain management research provides the data for decision-making (cohort analysis is one example).

Add the following to the list if not mentioned.

- May improve program performance (i.e., may lead to increased case detection and treatment success rates) and provides mechanism for self-appraisal and motivating workers
- Will provide documentation of program interventions for external audiences as well as for the program implementers
- Can be a useful tool for advocacy
- May show the contribution of a specific innovation to program success
- Can demonstrate to donors that your PVO has something important to offer TB control programs

Describe a continuum from monitoring and evaluation activities to management research to Operations Research and differentiate management research from Operations Research (latter done by few, requires statistical analysis whereas former done by many more as a step in management decision making, which is/should be done by all) Emphasize that innovation is limited to certain areas within the DOTS framework—for example, use of innovative methods to deliver DOT is within the framework, experimenting with different diagnostic approaches is not.

2. Review cohort analysis assignment from earlier session – 15 minutes

Remind participants of their small groups from the original cohort exercise and ask them to form those groups again to review their results. Show/hand out the example of the forms correctly completed. Ask each group to present their cohort analysis results, the problems identified and the actions or interventions they devised to further investigate and address these issues. Encourage participants to consider simple practical application of research to help manage problems and document the outcome of their innovations. Emphasize again the importance of using data to make management decisions. Ask for any questions or if any confusion exists about the process.

3. Close the session – 10 minutes

Ask:

- What do you think are the key messages from this session?

List the responses from the participants on a flip chart. Then read the prepared the flipchart of Key Messages. Compare the perceived and intended key messages.

KEY MESSAGE:

- ✓ **Effective supervision, monitoring and evaluation are key activities for identifying program problems and ensuring quality is maintained.**

- ✓ **Standardized international indicators exist for monitoring and evaluating TB control program components.**
- ✓ **Innovative practices must be conducted within the DOTS strategy framework.**
- ✓ **Management Research can be used to help achieve TB program goals.**
- ✓ **Documentation of innovations is necessary to build an evidence base which allows you to advocate for change and attract funding.**

Ask if there are any questions on monitoring, evaluation and supervision.

SESSION #12: VISIT TO A PUBLIC TB CLINIC

OBJECTIVES: By the end of this session, participants will:
1. Have toured a TB clinic in the public sector
2. Observed a provider-patient interaction
3. Observed the use of patient treatment cards and the TB registry
3. Witnessed facility-based DOT, if possible

PREPARATION:
TRAINER
- Arranged TB clinic visit(s)—depending on number of participants, 4-6 clinic sites may need to be used to allow a maximum of 4-5 visitors per site.

PARTICPANT
- Be attentive and respectful of patient privacy and confidentiality during the visit.

TIME: 3.5 hours

STEPS:
1. **Visit to TB clinic (public sector) – 3 hours**
   Participants will visit a public sector clinic where they will observe a provider-patient interaction (pending patient consent), and tour the facility, including the patient registration, waiting, and exam areas. In addition, participants will view the use of patient treatment cards and the TB registry. If DOT is being provided, participants will observe the administration of DOT (pending patient consent).

2. **Debriefing of TB Clinic Visit – 30 minutes**
   Upon return to the course classroom, ask:

   - ***What questions do you have about the visit to the TB clinic?***
   - ***Did anything you saw surprise you? If so, what and why?***
   - ***What new information did you learn during the site visit?***

SESSION #13: TB CONTROL PARTNERSHIPS: GLOBAL AND LOCAL

OBJECTIVES: By the end of this session, participants will:
1. Understand the typical NTP organizational structure and primary functions
2. Be aware of other in-country TB control partners
3. Be aware of global partners and initiatives, and their roles in TB control

PREPARATION:
TRAINER
- Prepare facilitated discussion(s)
- Key messages listed on a flip chart

PARTICIPANT
- Read Session #13 Readings in notebook

TIME: 45 minutes

STEPS:

1. Discussion of NTPs: organizational structure, function, and interaction with PVOs - 20 minutes

Ask:

- ***What is the NTP structure where your organization works in TB control?***

Draw the structure as described and ask for suggestions of possible links and relationships to the Ministry of Health and TB care services, drug management system, and surveillance system. Clarify the responsibilities of the NTP and why PVO collaboration with the NTP is essential.

Ask:

- ***What can an NTP expect of a PVO?***

Record all responses on a flipchart and ask for examples based on participants' experience.

2. Discussion of the different local collaborating partners– 15 minutes

Ask:

- ***Who are potential in-country and global partners for a TB control project? Include governmental as well as non-governmental agencies.***

The list should include the following. Note why/how they can be a potential partner. Clarify that these need to be evaluated on a case by case basis and do not constitute a checklist.

In-country
- Ministry of Justice (prison-based programs)
- Ministry of Education (health education/BCC activities)
- Ministry of Labor (advocacy for disability payments while TB patients are unable to work)
- Professional medical and nursing associations (clinician education and commitment)
- HIV/AIDS control program (joint control activities and mutual referrals)
- Other HIV/AIDS support agencies and PVOs (collaborating on care issues)
- Health education PVOs (BCC activities/campaigns)
- Social service agencies (assist with providing incentives)
- Pharmacist organizations (education and commitment)
- Private provider associations (education and commitment)

Global Partners and Initiatives:

- STOP TB Partnership
- the Global Drug Facility
- Green Light Committee
- Global Fund to Fight AIDS, TB and Malaria
- TBCTA
- WHO
- International Union Against TB and Lung Diseases.

3. Close the session – 10 minutes

Ask:

- What do you think are the key messages from this session?

List the responses from the participants on a flip chart. Then read the prepared the flipchart of Key Messages. Compare the perceived and intended key messages.

KEY MESSAGES:

- ✓ **The NTP oversees all TB control activities in a country; therefore, all PVO TB control programming must be planned in close collaboration with the NTP. The NTP is the PVO's senior counterpart, even in situations where private sector entities are delivering large portions of TB services**.
- ✓ **Several global agencies are contributing to TB control and can offer opportunities for collaboration.**
- ✓ **PVOs should operate in partnerships.**

Ask for and answer any questions about TB control partnerships.

SESSION #14: MULTIDRUG-RESISTANT TUBERCULOSIS (MDR-TB)

OBJECTIVES: By the end of this session, participants will:
1. Understand the differences in treatment between MDR-TB and drug-susceptible TB
2. Understand the distinctive set of skills needed to manage MDR-TB

PREPARATION

TRAINER
- Prepare facilitated discussion(s)
- Key messages listed on a flip chart

PARTICIPANT
- Read Session #14 Readings in notebook

TIME: 45 minutes

STEPS

1. Discussion of MDR-TB – 20 minutes

Ask:

- ***What is definition of multi-drug resistant TB?***

TB organism resistant to AT LEAST isoniazid and rifampin, the two most powerful anti-TB drugs.

- ***What is DOTS-Plus?***

A strategy for addressing MDR-TB. DOTS-Plus for MDR-TB is designed to manage MDR-TB in areas where it has emerged and needs to be addressed in conjunction with the treatment of patients with drug-susceptible TB.

- ***What are the differences between MDR-TB treatment and treatment of drug- susceptible TB?***

Emphasize MDR-TB treatment is:
- Longer (18-24 months or more)
- More costly
- More toxic
- More complex
- Less effective

Emphasize the importance of a good DOTS program to prevent the emergence of drug resistance and as a requirement before starting DOTS-Plus activities. Also mention that while many issues need to be considered when deciding whether to implement a DOTS-Plus pilot project, in general, a prevalence of MDR-TB among cases never treated previously above 3% may constitute a reasonable level to consider the necessity of a DOT-Plus approach.

Describe the Green Light Committee stressing that they link 2nd line drug distribution to careful monitoring to ensure the drugs are used appropriately and emergence of additional resistance is prevented.

2. Special skills and services needed to manage MDR-TB – 15 minutes

Ask:

- ***What are the special skills and services needed to manage MDR-TB?***

The list should include:
- Laboratories for bacteriology (DST)
- Provider education
- Meeting GLC requirements

- On-going surveillance
- Laboratory and clinical ability to evaluate for relevant medication adverse effects
- Systems to provide DOT for the full duration of therapy

If possible, include information about the status of DOTS-Plus activities in the country where the course is being held.

3. Close the session – 10 minutes

Ask:

- What do you think are the key messages from this session?

List the responses from the participants on a flip chart. Then read the prepared the flipchart of Key Messages. Compare the perceived and intended key messages.

KEY MESSAGES

- ✓ **Managing MDR-TB is complicated and, therefore, requires specialized expertise and services.**
- ✓ **An effective DOTS program is the best means of preventing emerging drug resistance and must be in place before MDR-TB management is initiated.**

Answer any remaining questions on MDR-TB.

SESSION #15: PEDIATRIC TUBERCULOSIS

OBJECTIVES: By the end of this session, participants will:
1. Understand the differences between childhood and adult TB.
2. Understand the difficulties in diagnosing and issues related to treating TB in children.
3. Understand the importance of TB prophylaxis in contacts under the age of 5.
4. Understand why pediatric TB has not been a focus of the DOTS strategy.
5. Appreciate the role of BCG vaccination.

PREPARATION

TRAINER
- Prepare facilitated discussion(s) and presentation
- Key messages listed on a flip chart

PARTICIPANT
- Read Session #15 Readings in notebook

TIME: 45 minutes

STEPS

1. Discussion of TB in children – 20 minutes

Ask:
- ***What are some of the ways in which diagnosing TB in children differs from TB in adults?***

Responses should include:
- Pulmonary TB is often asymptomatic or presents as Failure To Thrive
- Key element in diagnosis is report of contact with a TB patient
- Children are usually smear negative—and therefore non-infectious. Because of this, pediatric TB has not been a priority under DOTS (which is a control strategy aimed at halting the spread of TB and thus targets infectious cases)
- Children are usually unable to produce sputum
- Extrapulmonary TB: Pulmomary TB ratio in children is 3:1 (versus 1:3 or 1:4 in adults)
- Severe forms in youngest age group: children under age 5
- Use of tuberculin skin test in diagnosis: In general, many factors can render the skin test result unreliable thereby complicating its interpretation in resource poor settings.

2. Discussion of TB treatment issues for children – 10 minutes

Ask:
- ***What can you tell me about how TB is treated in children—similarities or differences from how TB is treated in adults?***

Responses should include:
- Regimens are similar except an injectable is required to treat TB meningitis
- medicines generally are well tolerated

Other issues to raise:
- Source case investigation versus contact investigation performed
- Isoniazid treatment for latent infection for child contacts of a smear positive TB case

If possible, include information about the pediatric TB policies and protocols in the country where the course is being held.

3. **Presentation on the role of BCG vaccination - 5 minutes**
   Share the information on BCG vaccination and answer questions.
   - Effective in preventing disseminated forms in under 5
   - No proven benefit to re-vaccinations (recommendation is one dose at birth)
   - Not effective in preventing pulmonary TB in adults (therefore not an effective control measure)

4. **Close the session – 10 minutes**
   Ask:
   - What do you think are the key messages from this session?

   List the responses from the participants on a flip chart. Then read the prepared the flipchart of Key Messages. Compare the perceived and intended key messages.

KEY MESSAGES:

- ✓ **Diagnosing TB is difficult in children.**
- ✓ **Since children are rarely infectious, pediatric TB has not been a priority of the DOTS strategy.**
- ✓ **BCG is effective at preventing disseminated forms of TB in children but not effective in preventing TB in adults.**

Answer any remaining questions on pediatric TB.

SESSION #16: TUBERCULOSIS AND HIV/AIDS

OBJECTIVES:
By the end of this session, participants will:
1. Understand the important connection between the TB and HIV epidemics
2. Understand the treatment issues for TB in HIV-infected individuals.
3. Identify the need for collaboration between TB and HIV/AIDS control programs and how linkages can be achieved.

PREPARATION:
TRAINER
- Winstone Zulu is Alive video, set up
- Prepare facilitated discussion(s)
- Handout on drug-drug interactions between TB medications and anti-retrovirals
- Key messages listed on a flip chart

PARTICIPANT
- Read Session #16 Readings in notebook

TIME: **60 minutes**

STEPS
1. **Optional: Presentation on TB and HIV negative synergy – 10 minutes**
   Show the film "Winstone Zulu is Alive" (it can be viewed at http://www.gatesfoundation.org/GlobalHealth/HIVAIDSTB/default.htm).
   Make a few remarks to highlight the overlap of the two epidemics and how HIV is driving TB incidence in sub-Saharan Africa. Discuss TB/HIV situation and projections for region or country where the course is being held.

2. **Discuss collaborative programming for TB and HIV – 20 minutes**
   Ask:
   - ***What are some collaborative activities that can be implemented to improve case finding for HIV-associated TB?***

   Ask participants to work in their small groups for 5 minutes then ask for responses. Ask participants to draw upon any real life examples they may be aware of.

   Responses should include:
   - Mutual screening for TB and HIV (make HIV testing available to all patients diagnosed with TB and screen all HIV-infected individuals for TB)
   - Identify and target vulnerable groups for both diseases (IVDU, CSW)
   - Shared treatment supporters (home care)
   - Joint TB/HIV planning committee/advisory body

3. **Discussion of TB treatment issues for HIV-infected persons – 20 minutes**
   Ask:
   - ***What are some of the TB treatment issues/complications for HIV-infected individuals?***

   Ask participants to work in their small groups for 10 minutes then ask for responses. Ask participants to draw upon any real life examples they may be aware of.

   Responses should include:
   - Drug-drug interactions between TB treatment and ARVs (mention 3x5 initiative)

- In general, ARV therapy is deferred until after TB treatment is completed (or at least the initial phase depending on the regimen used)
- INH prophylaxis for HIV infected with latent TB infection
- Be aware that the data base in this area continues to be developed rapidly—so check constantly for the latest guidance/recommendations.

Invite participants to share information about TB treatment issues for HIV-infected persons from their experiences in the field.

If possible, include information about the TB/HIV collaborative efforts in the country where the course is being held

4. Close the session – 10 minutes

Ask:

- What do you think are the key messages from this session?

List the responses from the participants on a flip chart. Then read the prepared the flipchart of Key Messages. Compare the perceived and intended key messages.

KEY MESSAGES:

- ✓ **TB and HIV epidemics are fueling one another. HIV is responsible for dramatic increases in TB rates in Sub-Saharan Africa.**
- ✓ **TB and HIV control and services should be linked. Close collaboration is necessary.**
- ✓ **TB is curable in HIV infected patients. However, TB treatment is more complicated when patients are on ARVs.**
- ✓ **INH prophylaxis is indicated for HIV-infected individuals with latent TB infection.**

Answer any questions about the relationship between TB and HIV.

SESSION #17: ROLE AND CHALLENGES OF PRIVATE SECTOR IN TB CONTROL

OBJECTIVES: By the end of this session, participants will:
1. Be aware of the full scope of the private sector
2. Understand the important role that the private sector plays in TB control activities
3. Consider the consequences of a lack of collaboration between the NTP and the private sector
4. Know of examples of successful interactions between NTPs and the private sector.

PREPARATION:
TRAINER
- Prepare facilitated discussion(s)
- Handout on successful public-private collaborative projects
- Key messages listed on a flip chart

PARTICIPANT
- Read Session #17 Readings in notebook

TIME: 1.5 hours

STEPS:

1. Discussion on collaborating with the private sector – 30 minutes

Ask:

➢ ***What are some examples of private sector practitioners for TB in places where you have worked?***

List responses on a flipchart. Broadly defined, private providers are any health care providers outside of the formal public health sector which may include:
- traditional healers
- pharmacists
- qualified practitioners of various fields of medicine including ayurveda, unani, homeopathy
- unqualified practitioners
- specialist (allopathic) physicians
- private hospitals and labs
- non-governmental organizations
- pharmacists

➢ ***What are some of the consequences of a lack of collaboration between public and private TB services?***

List responses on a flipchart. Ensure that list includes the following:
- Incomplete recording of TB cases
- Non-standardized and possibly erroneous diagnostic procedures
- Non-standardized and possibly erroneous treatment
- Non-standardized and possibly erroneous follow-up
- Patients may have to pay for various services and/or medications
- Lack of access to training in proper TB diagnosis and treatment for private providers

➢ ***What might be some barriers to public – private collaboration for TB services?***
- Actual or perceived loss of income
- Actual or perceived loss of patients from care
- Actual or perceived poor quality of services (e.g., long waits) in public sector
- Lack of respect for non-allopathic providers and unwillingness to collaborate with them
- Lack of trust between private and public providers

- Complicated logistics
- Additional work to train private providers

2. Case study small group exercise - 30 minutes

Distribute a case study and with participants working in small groups, ask them to develop an approach for public-private partnerships based on India's four schemes for partnerships described in their policy document (included in homework reading).

Have small groups summarize their plans to the whole group.

Alternatively, discuss the role of the private sector and PPM practices in the country where the course is being held

3. Discussion and brainstorming session on public-private collaboration – 20 minutes

Ask:

- ***What actions might work in your country settings to facilitate public-private collaboration for TB care? Why?***

Record responses on a flipchart and acknowledge innovative suggestions.

4. Close the session – 10 minutes

Ask:

- What do you think are the key messages from this session?

List the responses from the participants on a flip chart. Then read the prepared the flipchart of Key Messages. Compare the perceived and intended key messages.

KEY MESSAGE

- ✓ **The private sector can include a wide range of practitioners.**
- ✓ **Collaboration between the public and private sectors is necessary for effective TB control and achievement of global targets.**
- ✓ **Barriers to collaboration between the public and private sectors can exist on both sides and must be fully explored before undertaking a collaborative activity.**
- ✓ **Some countries have established guidelines for public-private collaboration.**

SESSION #18: CHANGING TUBERCULOSIS PERSONNEL BEHAVIOR

OBJECTIVES: By the end of this session, participants will:
1. Understand how we measure quality and performance of TB control activities
2. Be able to list and compare strategies that can be used to improve TB control program quality and performance.
3. Understand when training is (and is not) the most appropriate response to poor quality or performance

PREPARATION:
TRAINER
- Prepare facilitated discussion(s)
- Handout on pros and cons of different strategies for enhancing quality and performance
- Key messages listed on a flipchart

PARTICPANT
- Read Session #18 Readings in notebook

TIME: 60 minutes

STEPS:
1. **Discussion of quality performance for TB control programs - 20 minutes**
   Ask:
   - ***How do we measure the quality and performance of TB control activities?***

   Ask participants to recall the exercise with the Compendium of Indicators. List responses on a flipchart. Examples should include:
   - For quality: effective education of patients, correct methods to examine sputum slides under the microscope, patient-centered approach, adherence to TB program protocols
   - For performance: achieving 85% treatment success rate or 70% case detection rate or 95% sputum conversion at 3 months.

   If suggestions are made which are not standard indicators, ask what measurable indicator could be used to measure the improvement.

2. **Develop a list of strategies to enhance TB staff performance – 30 minutes**
   Remind the participants of the self-assessment exercise that identified all of the various partner groups and organizations in the TB control system: doctors, nurses, lab technicians, community DOT treatment supporters, private practitioners, etc.

   Ask:
   - ***What can you do to enhance quality and performance among TB control personnel?***

   Ask participants to work in small groups and allow 5 minutes to discuss **how** to bring about changes in behavior. Then ask each small group to report the strategies they identified. List the responses on a flipchart. Add any of the following if not mentioned.

Strategies for Enhancing Quality and Performance of TB Personnel
▪ Training ▪ Reading & giving written materials ▪ Mentoring ▪ Modeling

- Cooperatives
- Monitoring—including feedback of clear data/evidence to worker
- Supervision
- Incentives
- Performance Appraisal
- Cohort Analysis
- Job Aids
- Peer appraisal and peer mentoring
- Quality Improvement program
- Improve the environment in which services are provided (e.g. provide adequate resources, ensure no drug stockouts)
- Improve the system (e.g., it is not bad actors with bad behaviors which lead to poor quality, it is a bad system, and improving the system gets rid of the poor quality without direct efforts to change behavior)

Highlight that training is only one method and discuss the many options available. Invite participants to offer a few examples of "job aids" and their appropriate application. Stress that multiple strategies generally is more effective than a single method

Ask:

- ***What are the pros and cons of each item on our list?***

Have the participants remain in their small groups. Assign a portion of the list to each group with overlap so that each item will be discussed by more than one group. After 5 minutes, ask each group to present their responses.

Emphasize the purpose of training, that it is not an end in itself, but rather a whole range of techniques that increase performance (coaching, lecturing, workshops, hands-on learning, etc), and situations in which it is necessary and useful (e.g., when the problem is lack of information or skill). Discuss effective teaching techniques such as adult learning methods, and effective follow up to training. Mention that a Training Needs Assessment (TNA) which often assumes that training is necessary and that a more useful role for the TNA is to define first whether training is the appropriate response to observed quality deficiencies. A good TNA should allow a broader range of conclusions, and ensure that expensive training, which takes providers away from their work sites, is really necessary. Add that all good training is followed up to assess usefulness and clarify practice of the new knowledge.

The following day distribute a handout of the lists generated by the participants.

3. Close the session by highlighting the key messages - 10 minutes

Ask:

- What do you think are the key messages from this session?

List the responses from the participants on a flip chart. Then read the prepared the flipchart of Key Messages. Compare the perceived and intended key messages.

KEY MESSAGES:

- ✓ **Application of the full range of strategies to improve quality and effectiveness of services among TB control personnel is likely to be more effective and often less costly than standard training courses.**

- ✓ **The best interventions for improving quality and performance should be selected based on a needs assessment.**
- ✓ **Training is not the answer when lack of information or skill is not the problem. Training will not address other causes of poor performance such as inadequate working conditions, low morale, weak supervision, and insufficient compensation.**
- ✓ **All training needs follow up to increase the likelihood of implementation of the new knowledge.**

Answer any remaining questions about changing TB personnel behavior.

SESSION #19: TUBERCULOSIS PROJECT DESIGN – Continued

OBJECTIVES: By the end of this session, participants will:
1. Have identified all components of a project proposal and the key partners associated with each component.
2. Have identified specific roles for their organization in the project design.
3. Have drafted a new or revised TB control project and implementation plan

PREPARATION:
TRAINER
- Project design template.

PARTICIPANT
- Select country and bring NTP plan
- Completed self-assessment worksheet tool
- Contacted your HQ office to answer additional questions, as needed
- Created reasonable answers where no information was available (so as to complete the exercise).

TIME: 45 minutes

STEPS:
1. **Work in small groups – 45 minutes**
   Participants continue to work on their project design presentation for the final day. Assigned facilitator sits with his/her small group and acts as a consultant to the group.

   (See session #9 for further details.)

SESSION #20: VISIT TO A PRIVATE PROVIDER'S OFFICE

OBJECTIVES: By the end of this session, participants will:
1. Have toured a private practitioner's office.
2. Observed a provider-patient interaction.
3. Spoken with a private provider about pros and cons of collaboration with the NTP

PREPARATION:
TRAINER
- Arranged TB clinic visit(s)—depending on number of participants, 5-6 clinic sites may need to be used to allow a maximum of 4 visitors per site.

PARTICPANT
- Be attentive and respectful of patient privacy and confidentiality during the visit.

TIME: 3 hours

STEPS:
1. **Visit to a private practitioner's office – 3 hours**
   Participants will visit a public sector office where they will observe a provider-patient interaction (pending patient consent), and tour the facility, including the patient registration, waiting, and exam areas. Participants will have the opportunity to interview the provider regarding his/her scope of practice, usual recommendations for patients that present with cough for more than 2 weeks, his/her collaboration with India's RNTP (if any), and his/her willingness to collaborate with the public sector.

2. **Debriefing of visit to private practitioner's office – 30 minutes**
   Depending on schedule, this may need to be addressed the following morning.

SESSION #21: PRESENTATION OF TB PROJECT DESIGNS AND IMLEMENTATION PLANS – 4 hours

Each small group presents their TB project design to the group. Immediate feedback is provided by the facilitators as well as the other participants.

Time allotted for each presentation, feedback and Q&A depends on number of groups presenting:
7 groups – 30 minutes each (i.e., 20 minutes for presentation, 10 for feedback, discussion, Q&A)
8 groups – 25 minutes each (i.e., 15 minutes for presentation, 10 for feedback, discussion, Q&A)
10 groups – 20 minutes each (i.e., 10 minutes for presentation, 10 for feedback, discussion, Q&A)
Designate a timekeeper who will provide 5 and 1 minute warnings to presenters.

Guidance for providing feedback:

Strengths of project design:

Comprehensive:

Collaborations/Partnerships:

Feasible/Practical:

Financially reasonable:

Weaknesses:

Issues neglected:

SESSION #22: CLOSING SESSION – 60 minutes

1. **Review of course and future steps – 25 minutes**
   - Review course highlights. Review all the session titles, referring to the key messages posted on the wall. – 15 minutes
   - Lead discussion on PVOs' next steps. Ask for volunteers to discuss what next steps they are planning. Remind participants of references provided and where to get more information – 10 minutes.

2. **Final course evaluation – 15 minutes**
   Participants complete final course evaluation.
   Ask participants what helped them do the final project exercise. Obtain permission to use sample designs and critiques (anonymously) in future course or final version of facilitators' manual.

3. **Distribution of certificates/Closing Remarks - 20**
   - Distribute certificates – 10 minutes
   - Describe course follow-up (planning to contact participants in 2 months to see what they have used/found useful in practice) and how the group participants can help each other– 5 minutes
   - Closing remarks, including thank you's and general comments – 5 minutes

APPENDIX A

OPTIONAL: SELF-ASSESSMENT TOOL

Include in the participant's course notebook and advise participants to complete the self-assessment forms each evening as part of their preparation of the TB project design exercise, which will be presented on the final day.

SELF-ASSESSMENT QUESTIONS BY TOPIC:

Organizational preparedness
1. Who are the population groups you serve and the partners with whom you work?
2. What are the activities that your organization undertakes?

TB case detection and diagnosis
1. How can your organization contribute to supporting good quality diagnostic methods?
2. Does your organization have in-house expertise for laboratory support? If not, where will you get it?
3. How can your organization support the necessary activities to strengthen the laboratory component?

Drug management
1. Has anyone in your organization had experience or training in facility stock management?
2. Are any of the drug management organizations working in the countries you are targeting for potential TB activities?

Recording and reporting
1. What experience does your organization have with managing epidemiological data?
2. What is your organization's capability to use reported data to make management decisions?
3. Has your organization performed monitoring and supervision of counterparts in the past?
4. How would monitoring and supervision of a TB control project differ from what your organization has done in the past?

Policy and advocacy
1. What is the experience of your organization in TB policy and advocacy?
2. How might your organization get engaged in the policy and advocacy process in the country where TB activities are being contemplated?

Supporting patient adherence
1. What opportunities for incentive systems can your organization explore?
2. What can your organization do to promote patient-centered treatment?

DOT treatment supporters and community based care
1. Does your organization have a good working relationship with local health care providers?
2. Does your organization have networks (or access to networks) of community based groups which may serve as community based treatment supporters?

Community awareness
1. What community experience does your organization have that you can build on to increase community awareness?
2. What behavior change methods can your organization utilize to facilitate patient utilization of services?

TB and HIV/AIDS

1. Is your organization managing an HIV/AIDS project?
2. If yes, does your organization have any interactions or collaborative activities with the NTP?
3. Which aspects of your HIV/AIDS project might lend themselves to joint TB/HIV activities? How might your organization develop these joint activities?

Improving quality/training:

1. What quality enhancement strategies does your organization use? Which ones could apply to work with a TB control program?
2. What levels of the TB system can your organization influence to enhance the quality of their performance?

Management research

1. What innovations to improve delivery of DOTS-based services might your organization make?
2. How can your organization plan in advance to capture the contribution of these activities to overall project success?

Monitoring and Evaluation (M&E):

1. What experience does your organization have with M&E in other health programs?
2. Which skills/practices/knowledge may be transferable to M&E of a TB project

Public-private sector collaboration:

1. Is your organization working with the private sector currently?
2. How might your organization work with private sector providers to improve TB control efforts?

APPENDIX B

Compiling the Notebooks & Other Materials

Materials to distribute at registration:

1. Management of Tuberculosis Training for Health Facility Staff (WHO Modules A-J)
2. A Guide for Tuberculosis Treatment Supporters
3. Compendium of Indicators for Monitoring and Evaluating Tuberculosis National Programmes
4. Stop TB Partnership folder

Other items:

1. TB Technical Reference Materials (USAID/CSHGP)
http://www.coregroup.org/working_groups/TRM_Tuberculosis_2005.pdf
2. An Expanded DOTS Framework for Effective Tuberculosis Control
http://www.who.int/tb/dots/framework/en/index.html

Compiling the notebooks:

At the front of the notebooks, insert the following in this order:

1. Course agenda at a glance
2. Copy of learning objectives from Facilitators' Manual
3. Copy of reading list for course

Insert tabs with the following headings:
Day 1
Day 2
Day 3
Day 4
Appendices

Full length materials that need to be photocopied and inserted in notebooks under Appendices tab:

1. Tuberculosis: Practical Guide (Medecins Sans Frontieres)
2. Treatment of Tuberculosis Guidelines for National Programmes (WHO manual) – AVAILABE ON WEB AT http://www.who.int/tb/publications/cds_tb_2003_313/en/index.html
3. NGOs & TB Control – AVAILABE ON WEB AT http://w3.whosea.org/tb/ngo.htm

Day 1

1) Summary in WHO's report Global Tuberculosis Control—surveillance, planning, finance, pages 1-3 [AVAILABLE ON WEB AT http://www.who.int/tb/publications/global_report/en/index.html]
2) Second Global Plan to Stop Tuberculosis—pages 29-34 [AVAILABLE ON WEB AT http://www.who.int/tb/publications/2006/en/index.html]

3) Case Detection Flow Diagram

4) Handout of Diagnostic Techniques
5) Laboratory Services in Tuberculosis Control, Part 1: Organization and Management—pages 13-18, 41-43 – AVAILABLE ON WHO'S WEBSITE, PUBLICATION CODE WHO/TB/98.258

Day 2

1) The Manager: Improving Drug Management to Control Tuberculosis – I WILL BRING HARDCOPY
2) Panambia Drug Management Case Study – I WILL SEND TO YOU
3) Report on the Meeting of the 2nd Ad Hoc Committee on the TB Epidemic—pages 6-7 – AVAILABLE AT http://whqlibdoc.who.int/hq/2004/WHO_HTM_STB_2004.28.pdf
4) Background Document Prepared for the Meeting of the 2nd Ad Hoc Committee on the TB

Epidemic, Montreux, Switzerland, 18-19 September 2003—pages 7-10 – AVAILABLE AT http://whqlibdoc.who.int/hq/2004/WHO_HTM_STB_2004.27.pdf

5) Community Contribution to TB Care—pages 13-15 & 18-19 and table on page 27* - AVAILABLE ON WHO WEBSITE
6) 5 DOT Case Studies
7) Pros and Cons Forms for each DOT Case Study
8) Patient Treatment Flow Diagram

Day 3

1) Fact Sheet from IUATLD on MDR-TB

Day 4 – February 23rd

1) Stop TB Flyer – TB-HIV Fueling Each Other
2) Interim Policy on Collaborative TB/HIV Activities, pgs 1-12 – AVAILABLE ON WEB AT http://whqlibdoc.who.int/hq/2004/WHO_HTM_TB_2004.330.pdf
3) Involving Private Practitioners in TB Control—pages 29 (table), 35-36, 45 (table) – AVAILABLE ON WHO SITE, PUBLICATION CODE WHO/CDS/TB/2001.285
4) Public-Private Mix for DOTS—pages 5-6 – AVAILABLE ON WHO SITE, PUBLICATION CODE QHO/CDS/TB/2003.325
5) Involvement of Private Practitioners in the Revised National TB Control Programme, India Ministry of Health and Family Welfare – AVAILABE AT http://www.tbcindia.org/pdfs/Involvement%20of%20Private%20Practitioners%20in%20RNTCP.pdf
6) Public-Private Mix in the Revised National TB Control Programme, chapter 15 from TB Control in India, pages 135-143 - AVAILABLE AT http://www.tbcindia.org/pdfs/Tuberculosis%20Control%20in%20India15.pdf
6) Training for Better TB Control—pages 7-13 – AVAILABLE AT http://whqlibdoc.who.int/hq/2002/WHO_CDS_TB_2002.301.pdf
7) Second Global Plan to Stop Tuberculosis – pages 35-41
8) Template of TB control program design and implementation plan

APPENDIX C

Participant Course Reading Assignments and Homework

NOTE: All reading assignments during the course are from the books/manuals that received at registration or are included in the course notebook. Photocopied materials consisting of selected pages (marked with an asterix below) can be found in the notebook under the appropriate day's tab.

PRIOR TO ARRIVAL AT COURSE YOU SHOULD HAVE READ:

1) TB Technical Reference Materials (USAID/CSHGP)
2) An Expanded DOTS Framework for Effective Tuberculosis Control

READING MATERIALS YOU WILL RECEIVE AT THE COURSE:

5. Management of Tuberculosis Training for Health Facility Staff (WHO Modules A-J)
6. A Guide for Tuberculosis Treatment Supporters
7. Compendium of Indicators for Monitoring and Evaluating Tuberculosis National Programmes
8. Tuberculosis: Practical Guide (Medecins Sans Frontieres) – a photocopy of this manual is under the Appendix tab in your notebook.
9. Treatment of Tuberculosis Guidelines for National Programmes (WHO manual) – a photocopy of this manual is under the Appendix tab in your notebook.
10. NGOs & TB Control – a photocopy of this manual is under the Appendix tab in your notebook.

ASSIGNMENTS TO BE COMPLETED IN PREPARATION FOR EACH SESSION

Day 1

Session #1: Tuberculosis—The Patient and Disease, & the DOTS Strategy
Readings:
1) Tuberculosis: Practical Guide (MSF)—pages 12-14
2) Management of Tuberculosis Training for Health Facility Staff, Module B: Detect Cases of TB—page 1

Session #2: TB as a Global Health Crisis
Readings:
1) Summary in WHO's report Global Tuberculosis Control—surveillance, planning, finance, pages 1-3*
2) Second Global Plan to Stop Tuberculosis—pages 29-34*

Session #3: Tuberculosis Case Detection and Diagnosis
Readings:
1) Management of Tuberculosis Training for Health Facility Staff, Module B: Detect Cases of TB—page 2-12
2) Case Detection Flow Diagram*
3) Tuberculosis: Practical Guide (MSF)—pages 26-31

Session #4: Role of the Laboratory
Readings:
1) Handout of Diagnostic Methods Comparison*
2) Laboratory Services in Tuberculosis Control, Part 1: Organization and Management—pages 13-18, 41-43*

Day 2

Session #5: Tuberculosis Treatment
Readings:
1) Management of Tuberculosis Training for Health Facility Staff, Module C: Treat TB Patients—pages 1-2 (up to "Objectives"), 3-6, 13, 17, 31, 47-48
2) Treatment of Tuberculosis: Guidelines for National Programmes—pgs 87-98

Session #6: Managing TB Drugs and Supplies
Readings:
1) The Manager: Improving Drug Management to Control Tuberculosis*
2) Panambia Drug Management Case Study*

Session #7: Recording and Reporting
Readings:
1) Management of Tuberculosis Training for Health Facility Staff, Module H: Monitor TB Case Detection and Treatment—pages 2-3 (skip Optional Exercise A on page 4), 13-19
2) Compendium of Indicators for Monitoring and Evaluating National Tuberculosis Programmes, Appendix B: Sources of Tuberculosis Data – Standardized Tuberculosis Data Collection Tools and Reports, pages B1-B14

Session #8: TB Control Partnerships: Global and Local
Reading:
1) NGOs and TB Control—pages 11-13 and 33-39

Session #9: Introduction to TB Project Design
Task:
1) Review template of a TB control project design and implementation plan.*
In addition, you are expected to have gathered information about your organization's capabilities and vision for TB control projects as well as background data on an area where you will propose your TB project be based.

Session #10: Supporting Patient Adherence with DOT and Community-Level Programming
Readings & Task:
1) A Guide for Tuberculosis Treatment Supporters
2) Treatment of Tuberculosis: Guidelines for National Programmes—pages 47-51
3) Community Contribution to TB Care—pages 13-15 & 18-19 and table on page 27*
4) 5 DOT Case Studies*
5) Complete Pros and Cons Forms for each DOT Case Study*
6) Patient Treatment Flow Diagram*

Day 3

Session #11: Supervision, Monitoring and Evaluation
Readings and Task:
1) Compendium of Indicators for Monitoring and Evaluating National Tuberculosis Programmes, pages 1-17
2) TB M&E Case Study
3) Complete Cohort Analysis Exercise

Session #12: Visit to a public TB clinic
No reading required. Participants are reminded to respect patient privacy and confidentiality during the visit.

Session #13: Policy and Advocacy in TB Programming
Readings:
1) Report on the Meeting of the 2nd Ad Hoc Committee on the TB Epidemic—pages 6-7*
2) Background Document Prepared for the Meeting of the 2nd Ad Hoc Committee on the TB Epidemic, Montreux, Switzerland, 18-19 September 2003—pages 7-10*

Session #14: Multi-Drug Resistant Tuberculosis (MDR-TB)
Readings:
1) Fact Sheet from IUATLD on MDR-TB*
2) Tuberculosis: Practical Guide (MSF)—pages 64-65
3) Treatment of Tuberculosis: Guidelines for National Programmes—pages 99-104

Session #15: Pediatric Tuberculosis
Reading:
1) Tuberculosis: Practical Guide (MSF)—pages 40-41

Day 4

Session #16: Tuberculosis and HIV/AIDS
Readings:
1) Stop TB Flyer – TB-HIV Fueling Each Other*
2) Interim Policy on Collaborative TB/HIV Activities, pgs 1-12*
3) Tuberculosis: Practical Guide (MSF) [summary of drug-drug interactions]—pages pg 60-63
4) Additional optional reading: Treatment of Tuberculosis: Guidelines for National Programmes—pages 75-82

Session #17: Role and Challenges of Private Sector in TB Control
Readings:
1) Involving Private Practitioners in TB Control—pages 29 (table), 35-36, 45 (table)*
2) Public-Private Mix for DOTS—pages 5-6*
3) Involvement of Private Practitioners in the Revised National TB Control Programme, India Ministry of Health and Family Welfare—pages 5-7, 35-40*
4) Public-Private Mix in the Revised National TB Control Programme, chapter 15 from Tuberculosis Control in India, pages 135-143*

Session #18: Changing Tuberculosis Personnel Behavior
Readings:
1) Training for Better TB Control—pages 7-13*

Session #19: Tuberculosis Project Design – continued
Readings and Task:
1) NGOs and TB Control—pages 14-32
2) Second Global Plan to Stop Tuberculosis – pages 35-41*
3) Come prepared to work on your project design and presentation.

Session #20: Visit to a Private Provider's Office
No reading required. Participants are reminded to respect patient privacy and confidentiality during the visit.

Day 5

Session #21: Presentation of TB Project Designs and Implementation Plans
Task:
1) Prepare presentation of your design of a TB control program and implementation plan (expansion or start-up).

Session #22: Closing Session
Certificates will be issued.

APPENDIX D

COURSE CASE STUDIES

Session #6: Managing TB Drugs

Panambia Drug Management Case Study

Your TB control project plans include promoting DOTS expansion in Panambia. You make a pre-project visit to Panambia to evaluate the current TB situation. Dr. Aboagye , director of the national TB program (NTP) in Panambia reports that the treatment success rate is 62% (WHO target is at least 85%) and the case finding rate is 34% (WHO target is at least 70%). He also reports that he is interested in expanding DOTS from 50% coverage which is currently the case to 75% next year.

The NTP uses loose drugs which are not in combined form nor are they in blisters. They are normally purchased in bottles of 1000 tablets. Drugs used for the intensive phase of treatment are rifampicin (R), Isoniazid (H), Pyrazinamide (Z), Ethambutol (E) for Category I and III patients and RHZE plus Streptomycin (S) for Cat. II and for continuation treatment RH for Cat. I and III and RHE for Cat. II

While visiting a health center where TB patients are treated, Dr. Briame told you that facilities have to pick up their stocks from the district warehouse. She also said that streptomycin is sometimes out of stock; ethambutol was unavailable for 1 month in 2004.

As patients leave the TB clinic you ask them how they are feeling and how treatment is going. Patients you interview report that they are tired of going to the clinic and not receiving all their drugs. They also admit that unless someone is watching they don't take all the tablets since the program requires them to take 10 tablets at one time daily during the intensive phase. They just can't swallow that many.

One patient complained that they may have to discontinue treatment because they must buy syringes to receive the S injection. During the intensive phase two patients mention they have to travel long distances to get to the TB clinic.

While talking to some of the TB doctors and nurses you learn that workload is too high to provide directly observed therapy (DOT) for intensive phase. For the same reason DOT is not practiced for the continuation phase. Patients return to the health facility once a month for consultation and to receive next month's drugs while in Continuation phase.

Case Study Questions:

1. What are some of the key TB drug management weaknesses for promoting DOTS expansion in Panambia?
2. Which persons or groups could you approach about drug management problems to support DOTS expansion?
3. What specific activities could you do with the persons or groups that you approach to improve drug management?

Session #9: TB Control Design and Implementation Plan

Create a draft TB control project design and accompanying implementation plan for either a new project or expansion of current activities. Consider each of the components of the DOTS strategy and your organization's strengths, experience and current programming in the region/country (if applicable). The self-assessment is should guide your project design and development. Subsections of your project design should include, but are not limited to, the following:

- Epidemiology and situational analysis
- Vulnerable groups
- Evidence of political commitment
- Laboratory services (including QA)
- DOTS coverage
- What others are doing in related areas (geographic and programmatic)
- Current problems
- Proposed Strategy
- Implementation Plan

Session # 10: Supporting Patient Adherence with DOT and Community-Level Programming

1) Community-based TB control in Bangladesh

Setting: The disease control programme of the Bangladesh Rural Advancement Committee (BRAC), a Bangladesh NGO, includes community-based TB control activities. The population served was primarily rural and 80% are agriculturists.

BRAC has substantial experience in the successful mobilization of community groups. The Health Nutrition Population Program (HNPP) trained community health workers in each village, providing an opportunity to integrate TB services. Additional infrastructure and supervisory staff are also available to support a TB program. BRAC was given complete responsibility for implementation of TB control activities in the area. BRAC program organizers visit villages and encourage development of village organizations (one for every 40-50 households) that then selects the DOT supervisors (CHWs) for training. BRAC DOT supervisors conduct community health education related to TB during routine visits. Case finding, community DOT and defaulter retrieval are other key activities done by DOT supervisors present in each village. Supervisors at home initiate treatment after introduction of the patient from clinic and on execution of a bond by the patient for completion of treatment with community members as witness and on payment of a deposit. The supervisors receive seven weeks training. BRAC has a well-defined supervisory system at various levels, which include BRAC and government officers.

Results and Conclusion: The supervisors seems largely acceptable to community members, patients and public health workers, despite early resistance related to gender and religious issues. Coverage extended to cover 1.8 million people in 1992. Cure rates of 85-90% are regularly achieved in BRAC project areas compared with around 80% for the NTP outside these areas. Default rate is substantially lower in BRAC areas.

Adapted from Community Contribution to TB Care: Practice and Policy,
Pages 61-70.

Session # 10: Supporting Patient Adherence with DOT and Community-Level Programming

2) Decentralization of TB treatment from Hospital to the peripheral health units and in the community in Machakos, Kenya

Setting: Machakos, a rural district in the Eastern Province of Kenya, 50 km from Nairobi had a population of 900,000 in 1999. Most residents are relatively poor, rural, subsistence farmers. The TB case rate increased 4-fold in Kenya in the 1990s, and with the NTP policy of admitting to the hospital all new patients for DOT, overcrowding and decreased cure rates followed. The HIV epidemic spread rapidly with half of all hospital beds filled with patients with HIV-related disease. Prior to decentralization, all TB patients were admitted to hospital for 2 months followed by 6 months of outpatient treatment during which patients collected their drugs from a clinic each month. With decentralization, ambulatory care was offered. TB patients not living within walking distance of a health facility were given the choice of traveling to the facility for DOT, or having DOT supervision by a community volunteer. Volunteers collected drugs weekly from health facilities, provided DOT, recorded treatment, and met regularly with the health services staff.

Objective: To evaluate the impact on district TB programme performance, costs and cost-effectiveness, of decentralizing TB treatment by providing ambulatory care through peripheral health units and in the community.

Results and Conclusion: The number of patients registered in the control period (1996) was 1,141, and almost all were admitted to hospital during the initial phase. In the intervention period (1998 and 1999) 3,244 patients were registered, and only 153 (5%) were admitted for the initial phase of treatment. Average length of stay in hospital fell from about 60 days to 4 days. Of the 3,244 patients, those choosing the different options for DOT supervision were: hospital clinic 1,618 (50%), peripheral health unit 904 (30%), and community volunteer 569 (18%). The options were broadly acceptable to patients, families and staff. Treatment outcomes among new smear–positive patients were similar in the intervention and control cohorts: treatment success (88% vs.85%) and death rates (4% vs.6%). Treatment completion was significantly higher among new sputum smear-negative and extra pulmonary TB patients in the intervention period (79% vs. 48%). The cost per patient for new smear-positive patients was US$ 591 with hospital based approach, and US$ 209 with decentralized care. Regarding cost-effectiveness, for new smear-positive patients, the cost per patient successfully treated fell from $ 696 to $239.

The decentralization of initial phase of TB treatment resulted in improved TB programme performance overall. Performance of new smear positive cases remained high. Machakos hospital closed its TB wards and patients and families expressed high satisfaction with the decentralized approach.

Adapted from Community Contribution to TB Care: Practice and Policy, pages 37-38.

Session # 10: Supporting Patient Adherence with DOT and Community-Level Programming

3) Integration of TB treatment in a community based home care programme for persons living with HIV/AIDS in Ndola, Zambia

Ndola district, Zambia, with a population of approximately 500,000 people has 42 townships with several shanty compounds. In 1995, TB control programme performance was poor, with a cure rate of 15-20%, a default rate during the initial phase of 25% and no follow-up sputum smears at 2 months in 75% of smear-positive cases. The Catholic Diocese of Ndola provides support to theses programmes in the form of technical assistance, drugs, transport and food. The community provides nursing care. In one compound Nkwazi, the home care programme incorporated TB care and achieved treatment completion rates of 80% or more. A study was conducted to evaluate the implementation of community-based DOT through an existing community–based HIV/AIDS home-care programme. New patients aged over 15 years with sputum smear-positive pulmonary TB, treated according to standard NTP treatment guidelines were enrolled. The option of community-based DOT through an existing HIV/AIDS home care programme was offered in one compound and treatment outcomes were compared with a compound where ambulatory TB treatment was provided by health center staff.

Results and Conclusions: During the study period of 1998 and first half of 1999, there were 104 new cases in the intervention compound Chipulukusu (72 smear positive) and 176 cases in the control compound Twapia (96 smear positive). Among new smear-positive cases, the treatment success rate was 61% in the intervention compound and 48.9% in the control compound. The default rate was 8.3% in the intervention compound and 22.9% in the control compound. There was a gradual and increasing acceptance of the role of community volunteers in providing DOT. Integration of TB care into an existing home-based HIV/AIDS programme in this setting was successful, with improved treatment outcomes.

Adapted from Community Contribution to TB Care: Practice and Policy, pages 45-46

Session # 10: Supporting Patient Adherence with DOT and Community-Level Programming

4) Traditional Healers as Community Based(CB) DOT providers: A Comparative Study

Setting: South Africa is experiencing explosive twin epidemics of HIV/AIDS and Tuberculosis. In the rural district of Hlabisa, located in KwaZulu Natal, 300 kms North-East of Durban, admission of adult TB patients increased by 360% between 1991 and 1998, with 65% of them being HIV infected in 1997. In order to cope with the increasing number of TB patients, a CB-DOT program was initiated. Patients chose their treatment providers who were laypersons or a Community Health Worker (CHW) or or a clinic-based health worker. Overall from 1992-1998, 80% of the patients completed treatment and CB-DOTS was shown to be highly cost-effective.

Traditional Healers (THs) who volunteered were chosen as DOT supervisors. Because of the limited cooperation between THs and the mainstream health system in the past and the sensitivity of the matter, consultations were carried out with all levels of health authorities and with TH representatives. Twenty-five THs attended two one-day training sessions on the management of TB. They were then integrated in the existing CB-DOT program thereby increasing patient options for DOT supervision to consist of a health worker at a local clinic, CHW, laypersons (i.e., shopkeepers), or a TH. Between 1999 and 2000, 53 (13%) patients were supervised by THs and 364 (87%) by clinics, laypersons or CHWs.

Objective: Since THs are spread throughout the rural areas and are widely consulted, a study was carried out to assess acceptability and effectiveness of THs as DOT supervisors.

Conclusion and Results: Overall, 87 % of those supervised by THs completed treatment compared with 67% of those supervised by others. The mortality rate among those supervised by THs was 6% whereas among those supervised by others it was 18%. None of the patients supervised by THs transferred out of the district during treatment whereas 5% of those supervised by others did.

Generally patients supervised by THs expressed high levels of satisfaction and all patients believed that THs should be DOT supervisors. A major advantage expressed was easy access to THs who generally live near the patients and the short waiting times when attending for treatment. Other reasons were that THs had a caring attitude and inquired about the general well-being of the patients they supervised. One patient said “they love their patients and treat the like their family”. As an example of this, three THs regularly visited 18 patients in their early phases of the treatment because these patients were at times too ill to leave their homes. In addition, three patients reported receiving food from their TH supervisors when attending for treatment.

THs are a potentially important group of providers that can be integrated into the TB control program. In Subsaharan Africa, the ratio of TH to population is 1:1500, in contrast to the doctor to population of 1:40,000.

Adapted from Community Contribution to TB Care: Practice and Policy, pages 48-49.

Session # 10: Supporting Patient Adherence with DOT and Community-Level Programming

5) Contributions of TB clubs to TB control in a rural district in Ethiopia

Setting: Ethiopia initiated its National TB Program in 1960. The country has a TB incidence of 117/100,000 per year and national geographic coverage with the DOTS strategy is 65%. Estie district is rural located in the Northwestern part of the country, with a population of 300,000. The district has one health center and 10 health stations. Recognition of TB control problems in the district led to revitalization of district tuberculosis control activities, including the formation of "TB clubs" (small support groups of tuberculosis patients based on where they live). Each club is comprised of 3-10 patients and assists with TB treatment adherence, referring TB suspects to health services, and links with other community members and groups. . The organization of patients into the TB clubs resulted in patients maintaining friendly ties among themselves and continuing "TB club" activities even after they finished treatment. These clubs eventually led to formation of TB mahibers (anti-TB associations). TB mahibers are more formally involved in TB control, in liaison with the NTP.

Objective: To determine how TB clubs and TB mahibers have contributed to case finding and treatment outcomes

Results and Conclusions: The number of TB clubs increased from 52 in 1997 to 65 in 1999, with a membership of 411. The number of TB mahibers increased from 2 in 1998 to 5 in 1999. The number of TB suspects referred increased from 181 in 1997 to 218 in 1999. Between 58-65% of all suspects were diagnosed with TB. Treatment success rates (cure plus treatment completion) for smear-positive pulmonary TB cases improved from less than 40% in 1996 to 80% in 1999. The defaulter rate decreased from 32% in 1996 to 2% in 1999. The treatment completion rate for smear-negative and extra-pulmonary TB was 75% in 1999. TB clubs and TB mahibers have made a positive contribution to improved NTP performance at little cost to health services. There is a continued increase in the number of TB clubs and TB mahibers.

Adapted from Community Contribution to TB Care: Practice and Policy, page 52

Session # 10: Supporting Patient Adherence with DOT and Community-Level Programming

DOT Case Study:_____

List the advantages to this model for PATIENTS:

List the disadvantages to this model for PATIENTS:

List the advantages to this model for PROVIDERS:

List the disadvantages to this model for PROVIDERS:

Session #11: Supervision, Monitoring and Evaluation
TB M&E Case Study – DOTS Expansion

Background

According to the last census conducted in 2001, the total population of Fictitia is 34 million people. Almost 68% of the population lives in rural areas and 57% are over the age of 15. Despite some progress in the early 1990s, economic growth has been slow over the past decade.

TB Situation

Although the MOH has limited funds to devote to TB, evidence suggests that there is political support for the DOTS strategy. The MOH began implementation of the DOTS approach in 1999. Unfortunately, the program has expanded slowly, resulting in little impact on improving TB control. TB control has remained a vertical system with much of the care hospital-based. Last year legislation was approved to support integration of TB services into the primary health care (PHC) system.

WHO's recent Global Report indicated that in Fictitia only 45% of expected new pulmonary smear-positive cases were detected. A review indicated that many pulmonary TB patients are reported without any smear result. Despite chronic under-detection and poor diagnostic practices, the absolute number rates of smear-positive cases have increased since 1995. Many of the doctors and nurses working in the public sector have not been trained in case detection and DOTS protocols.

In 2002, TB case notification rates in Fictitia were 127 cases per 100,000 of population and have increased by 18% since 1999. Mortality rates also increased during the same time period. Such a significant increase in mortality may be connected to the lack of anti-TB drugs in the country. (Fictitia relies on the GDF for anti-TB drugs, however, insufficient stocks have been reported recently at some facilities).

Fictitia's National TB Program has plans to do the following:

- expand DOTS coverage to most of the country by the end of 2005,
- end the practice of prolonged hospitalization for in-patient treatment,
- engage the PHC sector at the district level for administration of out-patient treatment for TB during the continuation phase,
- revise its drug distribution system.

Assignment

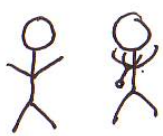
Review the table of indicators in the Compendium of Indicators for Monitoring and Evaluating National TB Programs. Select and prioritize indicators that you, as an advisor to the NTP manager, would recommend measuring to determine the success of the NTP in achieving its goal of decreasing TB morbidity and mortality in Fictitia.

APPENDIX E

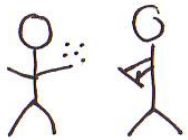
TB CASE DETECTION FLOW DIAGRAM

Tuberculosis Control Programming for PVO Program Managers Course
February 20-24, 2005 – Chennai, India

Session #5: TB Treatment
Patient TB Treatment Flow Diagram



Patient informed of diagnosis, treatment regimen, duration, side effects, monitoring, DOT, and follow-up.



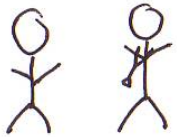
Patient takes medications under observation for 2 months.

Patient provides sputum specimen at end of 2 months.

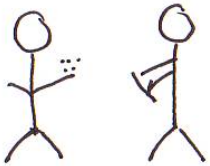
Provider must be well informed, present all info clearly, ensure patient understands, provide patient-centered care.

Patient must return for DOT (possible (travel, $$, take time from work/home/ family), tolerate meds well, remain compliant taking ~10 pills/dose for 2 mos.

Patient must travel ($$) to lab/ sputum collection site (may need to pay fee), take time from work/ home/family; specimens must be correctly processed and slides accurately read.



Provider adjusts medications based on smear result.



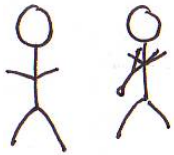
Patient takes medications under observation for 4 months.

Patient provides sputum specimen at end of treatment.

Provider must receive report of results must interpret them correctly and adjust regimen appropriately.

Patient must return for DOT (possible (travel, $$, take time from work/home/ family), tolerate meds well, remain compliant taking ~5 pills/dose for 4 mos.

Patient must travel ($$) to lab/ sputum collection site (may need to pay fee), take time from work/ home/family; specimens must be correctly processed and slides accurately read.



Patient returns to health facility for sputum microscopy results.

PATIENT CURED!

Patient must travel back ($$) to health facility, take time from work/home/family; provider must receive report of results, must interpret them correctly according to the treatment algorithm.

APPENDIX G

TB Course Pre- & Post-Test – ANSWER KEY
(delete answers before copying for participants)

1. Which of the following is true about TB treatment? Select one best answer.

A. Patient classification, which is used to determine treatment regimen, is based on age, gender and HIV status.
B. Appropriate monitoring of patients on TB treatment includes a sputum smear examination each month while on therapy.
C. HIV-infected individuals may need their TB regimen adjusted to accommodate concomitant anti-retroviral therapy.
D. Sputum smear conversion after 2 months of therapy is a not a reliable predictor of those patients that are likely to be cured.

ANSWER: C

2. TB can be reliably diagnosed by which of the following methods? Select all that apply.

A. Chest x-ray
B. Quality-assured sputum smear microscopy
C. Quality-assured mycobacterial culture
D. Tuberculin Skin Test

ANSWER: B & C

3. Which of the following is a true statement about tuberculosis in children? Select one best answer.

A. 100% coverage with BCG vaccine is an effective control strategy.
B. Children typically contract TB from other children.
C. Sputum smear microscopy is an effective diagnostic tool in children with pulmonary TB.
D. BCG is effective at protecting against TB meningitis in children

ANSWER: D

4. Which of the following is true about MDR-TB? Select one best answer.

A. MDR-TB is defined as resistance to all first-line TB drugs.
B. To initiate a DOTS-Plus program, the National TB treatment must have achieved a success rate of 50% or higher.
C. The current MDR-TB epidemic is primarily the result of past poor or incomplete treatment.
D. All laboratories in the area must have the capacity to do drug susceptibility testing.

ANSWER: C

5. Which of the following is true about policy and advocacy work in TB control? Select one best answer.

A. Political commitment to DOTS should be measured through several indicators such as existence of an NTP work plan and adequate allocation of financial and human resources.
B. Policy and advocacy work in TB control must be completed before initiating TB control activities.
B. Once a government has accepted the DOTS strategy, advocacy efforts are no longer a priority.
C. Policy and advocacy work in TB control is an inappropriate role for NGOs.

ANSWER: A

6. The DOTS strategy includes all of the following EXCEPT:

A. Treatment for TB with Directly Observed Therapy (DOT).
B. Standardized surveillance system.
C. Enough drugs to cover every patient starting treatment.
D. Routine testing of all TB patients for HIV infection
E. Government political and financial commitment

ANSWER: D

7. A DOT treatment supervisor can be: Check all that apply.

A. An Imam
B. A midwife
C. The local butcher
D. A neighbor
E. A doctor

ANSWER: ALL

8. Appropriate roles for NGOs in TB control can include all of the following EXCEPT:

A. Monitoring of laboratory staff
B. TB service delivery independent from the NTP.
C. Providing TB care to patients whom the public health sector has not been able to access
D. Training of NTP staff

ANSWER: B

9. All of the following are true about the global TB epidemic EXCEPT:

A. TB results in 2 million deaths per year
B. TB causes an average annual income loss of 30% among TB patients
C. TB control is currently sufficiently funded
D. Global TB rates are largely being driven by the HIV pandemic

ANSWER: C

10. Which of the following is true about the TB and HIV epidemics? Select all that apply.

A. Anti-TB drugs can be affected by anti-retroviral medications
B. Anti-retroviral drugs can be affected by anti-TB drugs
C. Persons with HIV infection and pulmonary TB are more likely to be sputum smear positive.
D. A TB/HIV collaborative strategy should include TB screening of all VCT patients that test positive for HIV.

ANSWER: A, B and D

11. A comprehensive laboratory network includes which of the following? Select one best answer.

A. A national reference laboratory (NRL) which is capable of performing mycobacterial culture and drug susceptibility testing.
B. A quality assurance program implemented independent of the NTP.
C. One smear microscopy lab unit per 250,000 population.
D. Quality assurance of smear microscopy by an international reference laboratory.

ANSWER: B

12. Which of the following is true about the pathogenesis of TB? Select one best answer.

A. A person with latent TB infection will eventually develop TB during their lifetime.
B. A person with latent TB infects an average of 10-20 people per year.
C. Persons with HIV infection have a 10% annual risk of developing active TB once infected.
E. Persons with sputum positive for acid-fast bacilli (AFB) are considered least infectious.

ANSWER: C

13. Which of the following is true about the TB global targets? Select one best answer.

A. Case detection target must be achieved before treatment success of target can be achieved.
B. Treatment success is calculated as the number of cured patients minus the number of default patients.

C. Case detection is the number of people in a country that test positive for TB.
D. Globally, the case detection rate is close to the target
E. Globally, the treatment success rate is close to the target.

ANSWER: E

14. Which of the following is the WHO recommended regimen for treatment of new smear positive TB patients? (SELECT ONE ANSWER ONLY)

A. 2 months of isoniazid, rifampin, pyrazinamide, ethambutol, followed by 4 months of isoniazid and rifampin.
B. 2 months of isoniazid, rifampin, pyrazinamide, ethambutol, followed by 4 months of isoniazid, pyrazinamide and rifampin.
C. 2 months of isoniazid, rifampin, and pyrazinamide followed by 4 months of isoniazid and rifampin.
D. 2 months of isoniazid, rifampin, pyrazinamide, ethambutol, streptomycin followed by 4 months of isoniazid and ethambutol.

ANSWER: A

15. All of the following are DOTS treatment outcomes for TB patients EXCEPT:

A. Treatment completed
B. Treatment after default
C. Transferred to another facility
D. Failed treatment

ANSWER: B

16. Which of the following is true about a TB surveillance system? Select one best answer.

A. Cohort analysis is the main management tool used to assess program effectiveness.
B. Cohort analysis provides information about why patients are interrupting treatment.
C. Analysis of treatment outcomes (cohort data) is done only at the district level.
D. Only smear-positive TB cases should be recorded in the TB Registry.

ANSWER: A

17. Which of the following is true about TB drug management? Select all that apply.

A. To conserve NTP resources, the lowest priced drugs should always be purchased.
B. In addition to providing free drugs, the Global Drug Facility also sells drugs at low cost to countries that have funds.
C. The cost of TB treatment for a patient with drug susceptible TB is US$11 per month.
D. Use of fixed-dose combination tablets reduces the risk of prescribing errors.
E. Use of fixed-dose combination tablets are recommended with twice weekly TB treatment regimen.

ANSWER: B & D

Course Title: Tuberculosis Control Programming for PVOs
Date, Location: February 20-24, 2006. Chennai, India

SESSION TITLE: _____

Please evaluate the following, choosing only one response per question.	1=Poor……5=Excellent
1. Your knowledge/skills on this session's topic BEFORE this session.	□1 □2 □3 □4 □5
2. Your knowledge/skills on session's topic AFTER the training.	□1 □2 □3 □4 □5
3. Your overall rating of this session.	□1 □2 □3 □4 □5
4. The extent to which this session met your training needs.	□1 □2 □3 □4 □5
5. The relevance of this session to your work.	□1 □2 □3 □4 □5

What was useful about this session? ~ How could this session have been improved? **Other comments, ideas, suggestions?**

CORE's TB Programming for PVO Managers
Date, Location: February 20-24, 2006. Chennai, India

Overall Course Evaluation

Please evaluate the following, choosing only one response per question.	1=Poor……5=Excellent
1. Your knowledge/skills on tuberculosis control programming **before** the training.	□1 □2 □3 □4 □5
2. Your knowledge/skills on tuberculosis control programming **after** the training.	□1 □2 □3 □4 □5
3. Your overall rating of the course.	□1 □2 □3 □4 □5
4. The extent to which the course met your training needs.	□1 □2 □3 □4 □5
5. The relevance of the training to your work.	□1 □2 □3 □4 □5

Objectives for this training course are listed below. Please rate the extent to which these objectives were achieved.	1=Not well achieved …5=Well achieved
Participants will:	
1. Learn the basic facts about tuberculosis from the individual to the global level.	□1 □2 □3 □4 □5
2. Review the internationally recommended TB control strategy (DOTS) and roles for PVOs in TB control programming.	□1 □2 □3 □4 □5
3. Understand the logical steps to getting started in TB control programming if it is a new area to their organization.	□1 □2 □3 □4 □5
4. Evaluate whether their organization is appropriately positioned to pursue expanded TB control programming.	□1 □2 □3 □4 □5
5. Strategize for their organization's expansion and/or innovation in TB control programming, as appropriate.	□1 □2 □3 □4 □5
6. Identify relevant institutional, human and technical resources for high-quality TB programming.	□1 □2 □3 □4 □5

Please rate how valuable you believe each session will be to you in your work, based on both quality and subject matter.

			1=Not useful to me… ….5=Very useful
	DAY OF ARRIVAL: Icebreaker		□1 □2 □3 □4 □5
	DAY 1, Monday, February 20th		
	Introduction	Lisa Adams/ Dennis Cherian	□1 □2 □3 □4 □5
1	TB-the Patient and Disease & DOTS Strategy	Lisa Adams/ Fraser Wares	□1 □2 □3 □4 □5
2	TB as a Global Health Crisis	Lisa Adams	□1 □2 □3 □4 □5
3	TB Case Detection and Diagnosis	Fraser Wares/ Lisa Adams	□1 □2 □3 □4 □5
4	Role of the Laboratory	Nevin Wilson	□1 □2 □3 □4 □5
	Role of the Laboratory: visit to smear microscopy lab and regional lab		□1 □2 □3 □4 □5
	DAY 2		
5	TB treatment	Lisa Adams/ Fraser Wares	□1 □2 □3 □4 □5
6	Managing TB drugs	Nevin Wilson	□1 □2 □3 □4 □5
7	Recording and Reporting	Lisa Adams/ Fraser Wares	□1 □2 □3 □4 □5
8	Partnerships in TB Control	Sri Chander	□1 □2 □3 □4 □5
9	Intro to TB Project Design	Lisa Adams/ Dennis Cherian	□1 □2 □3 □4 □5
10	Supporting Patients and DOT - part 1	Dennis Cherian	□1 □2 □3 □4 □5
	Supporting Patients and DOT - part 2	Dennis Cherian/ Fraser Wares	□1 □2 □3 □4 □5
	DAY 3		
11	Supervision, Monitoring and Evaluation	Lisa Adams/ Nevin Wilson	□1 □2 □3 □4 □5
12	Visit to a public TB clinic	ALL	□1 □2 □3 □4 □5
	Debriefing of TB clinic visit	ALL	□1 □2 □3 □4 □5
13	Policy and Advocacy	Dennis Cherian	□1 □2 □3 □4 □5
14	MDR-TB	Lisa Adams	□1 □2 □3 □4 □5
	DAY 4		
16	TB & HIV	S.S. Lal	□1 □2 □3 □4 □5
17	PPM/Private Sector-part 1	S.S. Lal/ Nevin Wilson	□1 □2 □3 □4 □5

	PPM/Private Sector-part 2	S.S. Lal/ Nevin Wilson	□1 □2 □3 □4 □5
15	Pediatric TB	Lisa Adams	□1 □2 □3 □4 □5
19	Work on Project Design with facilitator	ALL	□1 □2 □3 □4 □5
20	Visit to a PPM site or to a private practitioner's office	ALL	□1 □2 □3 □4 □5
	DAY 5		
21	TB Project Design Presentations (1st half)	ALL	□1 □2 □3 □4 □5
	TB Project Design Presentations (2nd half)	ALL	□1 □2 □3 □4 □5
22	Closing—review course highlights, discuss follow up and present certificates	ALL	□1 □2 □3 □4 □5

Any insights, anecdotes or ideas to help us improve this course or understand how it has affected you and your work?

Thank you very much for your participation in this course and your work on this evaluation.