

Unit 11: Human resource development for implementing collaborative TB/HIV activities

Objectives

By the end of this unit, participants will be able:

- 1) to describe the overall goal for human resource development for implementing collaborative TB/HIV activities and the strategies to reach and sustain this goal;
 - 2) to describe the elements of a human resource development plan for implementing collaborative TB/HIV activities; and
 - 3) to identify priorities and propose solutions to strengthen human resource development for implementing collaborative TB/HIV activities in Fictitia.
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Methods

Plenary presentation: Human resource development for implementing collaborative TB/HIV activities

Exercise

Plenary discussion

Materials

Document 11.1: Human resource development for implementing collaborative TB/HIV activities (slides)

Document 11.2: Exercise

Document 11.3: Human resources for collaborative TB/HIV activities: training and staffing (handout)

Document 11.4: *Management of tuberculosis – training for health facility staff (10)*

Document 11.1

Human resource development for implementing collaborative TB/HIV activities Document 11.1



TB/HIV course for managers at the national and subnational levels

1

Objectives of the unit

- To describe the overall goal for human resource development for implementing collaborative TB/HIV activities and the strategies to reach and sustain this goal
- To describe the elements of a human resource development plan for implementing collaborative TB/HIV activities
- To identify priorities and propose solutions to strengthen human resource development for implementing collaborative TB/HIV activities in Fictitia

2

Human resource development What do we mean?

Human resource development for collaborative TB/HIV activities sets a broader agenda, including not only the organization of specific training courses but the overall management of training and other human resource development activities

It includes the availability of enough staff of the categories of personnel involved in comprehensive TB control and HIV/AIDS prevention and care at all levels, clinical and managerial, necessary to reach a specific long-term goal for professional competence in TB/HIV.

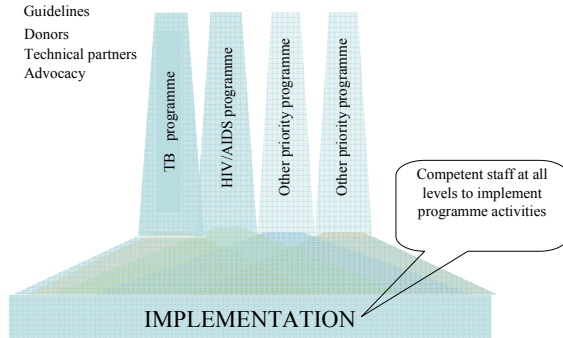
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The vision for human resource development for collaborative TB/HIV activities

A world in which health systems, public and private, have adequate staffing with the relevant professional competencies and the support systems needed to motivate staff to use their competencies to provide quality preventive and curative services for comprehensive TB/HIV care to the entire population according to their needs

4

Global policies
Strategies
Guidelines
Donors
Technical partners
Advocacy



5

Human resource development for TB/HIV

- Collaborative TB/HIV activities cannot be simply added to the responsibilities of the staff currently implementing the DOTS strategy or HIV/AIDS prevention and care.
- In many instances, additional staff with appropriate expertise have to be hired to manage the activities of collaborative TB/HIV activities at the central and lower levels.

6

Objectives of the human resource development component of the plan for collaborative TB/HIV activities:

- To ensure that all staff involved in the programmes (at all service level, and both public or private) are competent (have the required knowledge, skills and attitudes) and motivated to implement it
- To ensure that enough staff (clinical and managerial) are available at all levels to implement the plan without harming other areas of work of the national TB control programme or national HIV/AIDS control programme.

7

Constraints in human resource development for collaborative TB/HIV activities

- Training and competence (quality) of the existing workforce
- Staffing and motivation (quantity and availability)
 - Imbalances
 - Shortages

8

Constraints in training and competence

- Inadequate skills of existing staff
 - Many staff involved in TB control or HIV/AIDS prevention and care not fully trained
 - Suboptimal training (in-service training): lack of specific measurable learning objectives, training material, inadequate length of training, poor use of adequate training methods and lack of learning evaluation
 - Trainers and managers assume that everything taught is learned and will lead to high-quality performance
 - Lack of attention to other factors influencing behaviour change among health care providers

9

Constraints: staffing and motivation

- Imbalances in human resources for TB/HIV collaborative activities
 - Imbalances in overall numbers
 - Imbalances in distribution
 - Urban versus rural
 - Imbalances in skills or skill mix (a mismatch between the type or level of training and the skills required by the health system or job)
- Shortages of human resources for collaborative TB/HIV activities

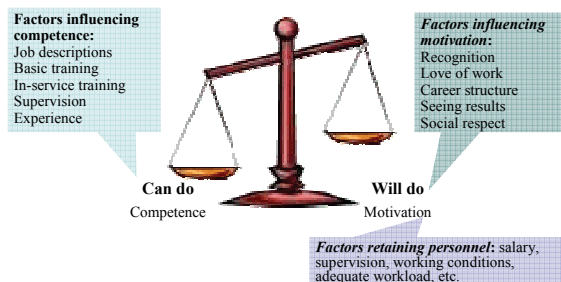
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Constraints: staffing and motivation

- Increased demand on existing staff – not only by TB and HIV/AIDS programmes
 - Impact of HIV/AIDS among staff
 - Low staff retention
 - Low staff motivation
 - Under skilled (inadequate and infrequent training)
 - Unsupported and lack of supervision
 - Poor working environment
 - Poor career structure
 - Underpaid
 - Overburdened
 - Morale problems
 - Sick or caring for sick family members
 - Insufficient number of posts
 - Increased brain drain
 - High staff turnover

11

Performance



12

Key strategies for national TB control programmes and national HIV/AIDS programmes to reach the goal

- **Organize in-service training (clinical and managerial)**
 - Initial training in basic DOTS implementation and HIV/AIDS prevention and care:
 - Retraining (major performance problems requiring more time than a supervisory visit to solve, such as a formal training course)
 - On-the-job training (refresher: small performance problems that can be addressed during a supervisory visit)
 - Continued training (to gain more skills and knowledge and not to go through the same training again; to practice skills for rare events)
 - Initial training on new skills (TB/HIV collaborative activities, Practical Approach to Lung Health (PAL) etc.)
- **Monitor and supervise:**
 - to detect performance deficiencies
 - to identify new staff who need training
 - to identify need for additional staff
- **Coordinate and collaborate with**
 - other in-service training programmes
 - health system management and human resources for health departments of the health ministry
- **Strengthen preservice training (basic training)**

13

Human resource development plan for implementing collaborative TB/HIV activities (1)

- Assign a focal point for human resource development for collaborative TB/HIV activities within the national TB control programme or national HIV/AIDS control programme (normally the focal point for overall human resource development for either programme).
- Assess the human resource requirements of the collaborative TB/HIV activities and the implications for the existing workforce (clinical – including DOT and TB/HIV prevention and care; managerial; laboratory; and pharmaceutical).
 - Define tasks to be performed at each level of the system to implement the collaborative TB/HIV activities.
 - Assign tasks to specific categories of health workers.
 - Assess the time needed to implement these tasks, especially at the peripheral level (where changes in the number and type of cases diagnosed and treated have the biggest impact on the workload).
 - Assess how many staff of the respective categories are needed to maintain the current service delivery level and include collaborative TB/HIV activities.

14

Human resource development plan for implementing collaborative TB/HIV activities (2)

- Assess the current human resource situation of the national TB control programme, national HIV/AIDS control programme or health system and determine the number of staff of the relevant categories available at any time.
- Identify the human resource gaps both in terms of numbers required (increased numbers, additional roles and responsibilities – such as a coordinator for collaborative TB/HIV activities) and the quality of staff (additional competencies – knowledge and skills – needed) to implement the activities.

15

Human resource development plan for implementing collaborative TB/HIV activities (3)

- Prepare short- and medium-term plans, including how to ensure adequate staffing and preparation and how to implement training programmes based on the task analysis.
- Consider:
 - In-service training (clinical and managerial)**
 - Initial training in implementing collaborative TB/HIV activities.
 - Retraining (major performance problems requiring more time than a supervisory visit to solve, such as a formal training course)
 - On-the-job training (refresher: small performance problems that can be addressed during a supervisory visit)
 - Continued training (to gain more skills and knowledge and not to go through the same training again)

16

Human resource development plan for implementing collaborative TB/HIV activities (4)

- Coordination with other in-service training programmes and training institutions and human resource departments (in particular, measures to retain trained staff with interventions to stop unnecessary rotation of staff; and support for career paths)
- Preservice training (basic training in skills needed prior to entering the workforce).

17

Human resource development plan for implementing collaborative TB/HIV activities (5)

- Ensure monitoring and supervision:
 - to detect performance deficiencies in newly trained staff
 - to identify new staff who need training (additional staff needs or staff vacancies).
- Ensure timely implementation of the plan and regular monitoring of the implementation.
- Periodically evaluate the implementation of the plan and revise as necessary.

18

Conclusion

- Having a competent workforce for collaborative TB/HIV activities must be seen and managed in the broader perspective of managing the health workforce for better performance.
- This brings together the health and educational sectors to achieve three core objectives of human resource development – competence, coverage and motivation.
- Human resource development for TB/HIV will never be completed – as TB and HIV/AIDS programmes improve their performance, human resource development becomes more complex.
- Human resource development requires long-term management

19

Document 11.2

Introduction to the exercise for Unit 11

For this exercise, your facilitator will divide the participants into groups of three. The purpose of the exercise is to analyse the human resource development situation for implementing collaborative TB/HIV activities in Fictitia, to identify gaps and to propose activities to address the gaps.

- Recall aspects of human resource development in the report from Fictitia in Annex 1.
- Analyse what has been done so far in Fictitia to manage human resource development for implementing collaborative TB/HIV activities. Review specifically how the national TB control programme and the national HIV/AIDS programme are implementing activities to reach and sustain the goal for human resource development for controlling TB and HIV/AIDS.
- Identify gaps in the current human resource development activities for implementing collaborative TB/HIV activities and propose an overall plan to address the gaps.
- Prepare to present the group work in the plenary session.

Tell a facilitator when you are ready for the plenary discussion.

Document 11.3

Human resources for collaborative TB/HIV activities: training and staffing

1. Introduction

Human resource development for collaborative TB/HIV activities sets a broad agenda including not only organizing specific training courses but managing overall issues related to training and staffing. It includes the availability of sufficient staff of all the categories of personnel involved in the collaborative TB/HIV activities at all levels, clinical and managerial, trained as necessary to reach a specific long-term goal for professional competence in implementing collaborative TB/HIV activities. Thus, the challenge for programme managers and technical support agencies is to ensure that managerial and clinical staff are competent to implement the collaborative TB/HIV activities and to ensure that sufficient staff are available.

This document briefly discusses issues that should be considered in meeting this challenge.

2. Human resource development plan for collaborative TB/HIV activities within the framework of the overall human resource development activities for controlling TB

Collaborative TB/HIV activities cannot be simply added to the responsibilities of the staff currently implementing the DOTS strategy and HIV/AIDS prevention and care. There are numerous constraints to the effective performance of the health workforce, as indicated in Table 1. In many instances, additional staff with appropriate expertise have to be hired to manage collaborative TB/HIV activities at the central and lower levels. Central management should estimate staff requirements for implementing all aspects of the programme. Realistic projections, based on analysing tasks, revising job descriptions and estimating workloads for concerned staff form the basis for preparing a human resource development plan to support the implementation of collaborative TB/HIV activities. Issues include the needed level of effort and support systems (such as transport) required for treatment, for health care worker's visits, for psychosocial support and for clinical and laboratory personnel.

The objectives of the human resource development component of the collaborative TB/HIV activities are:

- to ensure that enough staff (clinical, psychosocial and managerial) are available at all levels to implement the plan without harming other areas of work of the national TB control programme or national HIV/AIDS programme; and
- to ensure that all staff involved in the programmes (at all service levels and both public or private) are competent (have the required knowledge, skills and attitudes) and motivated to implement the activities.

Table 1. Human resource constraints to implementing programmes

Training and competence	Staffing and motivation
<p>Inadequate skills of existing staff</p> <ul style="list-style-type: none"> • Many staff involved in TB control and HIV/AIDS prevention and care are not fully trained • Suboptimal in-service training: lack of specific measurable learning objectives and training material, inadequate length of training, poor use of adequate training methods and lack of learning evaluation • An assumption by trainers and managers that everything taught is learned and will lead to high-quality performance • Lack of attention to other factors influencing change in behaviour among health care providers • Training is seen as a time-limited activity: when the strategy for collaborative TB/HIV activities has reached 100% coverage training is “no longer needed since everyone has been trained” • Inadequate pre-service training 	<ul style="list-style-type: none"> • Imbalances in human resources for TB control and HIV/AIDS prevention and care <ul style="list-style-type: none"> – Imbalances in overall numbers – Imbalances in distribution – Urban versus rural – Imbalances in skills or skill mix: a mismatch between the type or level of training and the skills required by the health system or job • Shortages of human resources for TB and HIV/AIDS programmes • Increased demand on existing staff <ul style="list-style-type: none"> – not only by TB and HIV/AIDS programmes <ul style="list-style-type: none"> – Impact of HIV/AIDS among staff – Low staff retention – Low staff motivation <ul style="list-style-type: none"> ◇ Under-skilled (inadequate and infrequent training) ◇ Unsupported and lack of supervision ◇ Poor working environment ◇ Poor career structure ◇ Underpaid ◇ Overburdened ◇ Morale problems ◇ Sick or caring for sick family members • Insufficient number of posts • Increased “brain drain” • High staff turnover

The following steps should be considered in preparing and implementing the human resource development plan for implementing collaborative TB/HIV activities.

1. Assign a focal point for human resource development for collaborative TB/HIV activities within the national TB or HIV/AIDS control programme. This should be the human resource development focal point in TB or HIV/AIDS programmes or a person in their teams.
2. Assess the human resource requirements of the collaborative TB/HIV activities and the implications for the existing workforce (clinical, including directly observed treatment; managerial; laboratory; and pharmaceutical).

- Define the tasks to be performed at each level of the system to implement the collaborative TB/HIV activities.
 - Assign tasks to specific categories of health workers.
 - Assess the time needed to implement these tasks, especially at the peripheral level, where changes in the number and type of cases diagnosed and treated have the greatest impact on the workload.
 - Assess how many staff of the respective categories are needed to maintain the current service delivery level and include collaborative TB/HIV activities.
3. Assess the current human resource situation of the national TB control programme, national HIV/AIDS programme and health system and determine the number of staff of the relevant categories available at any time.
 4. Identify the human resource gaps both in terms of numbers required (increased numbers, additional roles and responsibilities – such as a coordinator for collaborative TB/HIV activities or a laboratory focal point) and the quality of staff (additional competencies needed) to implement the programme.
 5. Prepare short- and medium-term plans, including how to ensure adequate staffing and preparation and implementation of training programmes based on the task analysis. Consider:
 - In-service training (clinical and managerial)
 - Initial training in implementing collaborative TB/HIV activities
 - Retraining (major performance problems need more time than a supervisory visit to solve, such as a formal training course)
 - On-the-job training (refresher: small performance problems that can be addressed during a supervisory visit)
 - Continued training (to gain more skills and knowledge and not to go through the same training again)
 - Coordination with other in-service training programmes and training institutions and human resource departments (in particular, measures to retain trained staff with interventions to stop unnecessary rotation of staff; and support for career paths)
 - Preservice training (basic training in skills needed before entering the workforce)

When training programmes are being developed, ensure that:

- job descriptions are based on task analysis;
- training courses and programmes have skills-based learning objectives based on the task analysis and the job descriptions;
- training programmes and courses use methods and allocate time to allow participants to meet the learning objectives;
- the ratio of participants to facilitators in each course is at a level that allows participants to meet the learning objectives; and
- evaluation is objective to ensure that the learning objectives have been met and that the following issues are considered in planning and implementing evaluation:
 - Evaluation during the training course:
 - ◊ Evaluation by course participants
 - ◊ Evaluation of participants (to determine whether participants have learned the skills as outlined in the learning objectives and are therefore competent to do their jobs)

- Evaluation in the field:
 - ◇ Supervision (post-training evaluation) to identify performance problems and determine whether problems are due to lack of skill or lack of will
 - ◇ Specific follow-up immediately after training.
6. Ensure monitoring and supervision to:
 - detect performance deficiencies in newly trained staff; and
 - identify new staff who need training (additional staff needs and staff vacancies).
 7. Ensure timely implementation of the plan and regular monitoring of the implementation.
 8. Periodically evaluate the implementation of the plan and revise it as necessary.

Ensuring competent and sufficient human resources for implementing collaborative TB/HIV activities of high quality requires ongoing management. As the programme implementation expands, the management of human resources becomes more complex due to the continued and diversified demands on staff at all levels.

More information on human resource development is available in the following publications.

Training for better TB control – human resource development for TB control: a strategic approach with country support. Geneva, World Health Organization, 2002 (WHO/CDS/TB/2002.301).

World Health Organization and Rockefeller Foundation. *Human resources development for TB control: report of a consultation held on 27 and 28 August 2003.* Geneva, World Health Organization, 2003 (WHO/HTM/TB/2004.340).

Harries AD et al. Human resources for control of tuberculosis and HIV-associated tuberculosis. *International Journal of Tuberculosis and Lung Diseases*, 2005, 9:128–137.

Unit 12: Monitoring and evaluating the implementation of collaborative TB/HIV activities

Objectives

By the end of this unit, participants will be able:

- 1) to describe the role of monitoring and evaluating the implementation of collaborative TB/HIV activities;
 - 2) to describe the elements of monitoring and evaluating the implementation of collaborative TB/HIV activities; and
 - 3) to plan the monitoring and evaluation of the implementation of collaborative TB/HIV activities.
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Methods

Plenary presentation: Monitoring and evaluating the implementation of collaborative TB/HIV activities (slides)

Exercise

Plenary discussion

Materials

Document 12.1: Monitoring and evaluating the implementation of collaborative TB/HIV activities (slides)

Document 12.2: Exercise

Document 12.3: *A guide to monitoring and evaluation for collaborative TB/HIV activities (11)*

Document 12.1

Monitoring and evaluating the implementation of collaborative TB/HIV activities

Document No. 12.1



TB/HIV course for managers at the national and subnational levels

Objectives of the Unit

- To describe the role of monitoring and evaluating the implementation of collaborative TB/HIV activities
- To describe the elements of monitoring and evaluating the implementation of collaborative TB/HIV activities
- To plan the monitoring and evaluation of the implementation of collaborative TB/HIV activities

Monitoring

- Routine tracking of input, process and outcome data
- Ensures that resources are utilized, services are accessed, activities occur in a timely manner and expected outcomes are achieved
- Problems may indicate need for evaluation
- Uses routine records and regular reporting systems as well as health facility observation and client surveys
- Collected at the facility level, compiled at the district level and aggregated at the regional and national levels
- Feeding back analysed data to the district and facility levels is essential for managing performance

Evaluation

- More extensive analysis of programme data and data not routinely collected, to explore a perceived problem or issue in the programme
- Do the inputs generate the expected outcomes – outcome evaluation, and will these have the desired impact: impact evaluation?
- If not, what corrections are necessary?
- May require more in-depth analysis of additional data sources such as staff reports, interviews with staff or clients and focus groups
- Less frequent than routine monitoring

Reasons for monitoring and evaluation

- Facilitating the most effective and efficient use of human and financial resources to achieve maximum health benefit for the population served
- Programme management
 - Measure programme performance
 - Ensuring quality and effectiveness
 - Progress in achieving specific objectives
 - Identify problems and solutions
- Promote a learning culture focused on improving service
- Accountability
- Attracting resources

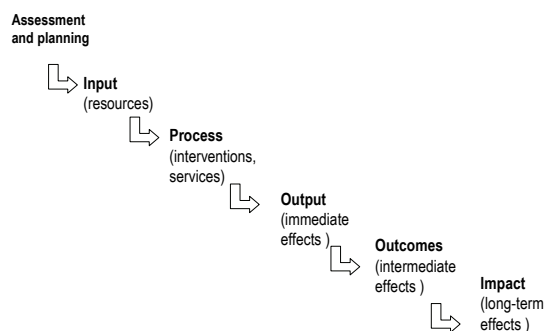
- Interim policy
- Guide to monitoring and evaluation



Steps in developing a monitoring and evaluation plan

- **Identifying the goals and objectives of the programme**
- Developing a monitoring and evaluation framework
- Defining and selecting relevant indicators
- Identifying sources of data and methods of collection
- Developing a plan for implementing monitoring and evaluation
- Disseminating and using the results

Monitoring and evaluation plan: tracking progress ...



Goal and objectives

Goal

To decrease the burden of TB and HIV in dually affected populations

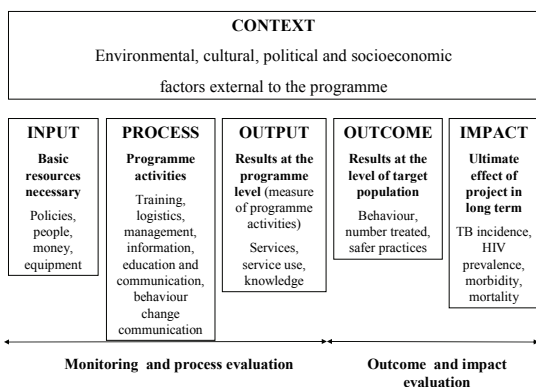
Objectives

- to establish the mechanisms for collaboration between TB and HIV/AIDS programmes
- to decrease the burden of TB among people living with HIV/AIDS
- to decrease the burden of HIV among TB patients

Steps in developing a monitoring and evaluation plan

- Identifying the goals and objectives of the programme
- **Developing a monitoring and evaluation framework**
- Defining and selecting relevant indicators
- Identifying sources of data and methods of collection
- Developing a plan for implementing monitoring and evaluation
- Disseminating and using the results

Monitoring and evaluation framework



Steps in developing a monitoring and evaluation plan

- Identifying the goals and objectives of the programme
- Developing a monitoring and evaluation framework
- **Defining and selecting relevant indicators**
- Identifying sources of data and methods of collection
- Developing a plan for implementing monitoring and evaluation
- Disseminating and using the results

A. To establish the mechanisms for collaboration
A.1. A coordinating body for TB/HIV activities effective at all levels.
A.2. Surveillance of HIV prevalence among people with TB
A.3. Joint TB/HIV planning including resource mobilisation, capacity building and training, information, education and communication enhancing community involvement and operational research.
A.4. Monitoring and evaluating TB/HIV activities.
B. To decrease the burden of TB among people living with HIV/AIDS
B.1. Intensified TB case-finding.
B.2. Isoniazid preventive treatment.
B.3. TB infection control in care and congregate settings
C. To decrease the burden of HIV in TB patients
C.1. HIV testing and counselling.
C.2. HIV prevention methods.
C.3. Co-trimoxazole preventive therapy.
C.4. HIV/AIDS care and support.
C.5. Antiretroviral therapy.

A. To establish the mechanisms for collaboration
A.1. A coordinating body for TB/HIV activities effective at all levels.
A.2. Surveillance of HIV prevalence among tuberculosis patients.
A.3. Joint TB/HIV planning including resource mobilisation, capacity building and training, information, education and communication, and enhancing community involvement and operational research.
A.4. Monitoring and evaluation of TB/HIV activities.
B. To decrease the burden of TB among people living with HIV/AIDS and their communities
B.1. Intensified TB case-finding.
B.2. Isoniazid preventive treatment.
B.3. TB infection control in care and congregate settings
C. To decrease the burden of HIV in TB patients and their communities
C.1. HIV testing and counselling.
C.2. HIV prevention methods.
C.3. Cotrimoxazole preventive therapy.
C.4. HIV/AIDS care and support.
C.5. Antiretroviral therapy.
D. Others
D.1 Political commitment
D.2 Partnership development and collaboration
D.3 Financial resources

Indicators for TB/HIV monitoring and evaluation

- At least one indicator for each activity defined in the *Interim policy on collaborative TB/HI activities*
- Additional input indicators (D)
- Total of 20 indicators in the monitoring and evaluation guide
- Eight defined as **core indicators**:

Indicator fields

- *Indicator Title*
- *Definition* – numerator and denominator
- *Purpose of indicator*
- *Methodology* – how and where to measure the indicator
- *Periodicity*
- *Strengths and limitations*
- *Importance* – core, desirable or optional
- *Responsibility* – who is responsible
- *Measurement tools*

A. 2 Surveillance of HIV prevalence among people with TB

- **Indicator A.2.1** Number of all registered people with TB who are HIV-positive, expressed as a proportion of all registered people with TB

B.1 Intensified TB case finding

- **Indicator B.1.1** Proportion of people living with HIV/AIDS attending for HIV testing and counselling or HIV treatment and care services who were screened for TB symptoms
- **Indicator B.1.2** Proportion of people living with HIV/AIDS attending for HIV testing and counselling or HIV treatment and care services who are newly diagnosed with TB through screening

B.2 Treatment of latent TB infection (Isoniazid preventive therapy)

- **Indicator B.2.1** Proportion of newly diagnosed HIV-positive clients who are given treatment for latent TB infection

C.1 HIV testing and counselling

- **Indicator C.1.1** Proportion of registered people with TB who are tested for HIV (after giving consent)
- **Indicator C.1.2** Proportion of registered people with TB tested for HIV (after giving consent) who test HIV-positive

C.3 Co-trimoxazole preventive therapy

- **Indicator C.3.1** Proportion of HIV-positive people with TB who receive (at least one dose of) co-trimoxazole preventive therapy during their TB treatment

C.5. Antiretroviral therapy

- **Indicator C.5.1** Proportion of HIV-positive registered people with TB who are started on antiretroviral therapy or continue previously initiated antiretroviral therapy during or at the end of TB treatment

C.5.1 Antiretroviral therapy

- **Definition** – Proportion of HIV-positive registered people with TB who are started on antiretroviral therapy or continue previously initiated antiretroviral therapy during or at the end of TB treatment
- **Numerator** – All HIV-positive people with TB, registered over a given time period, who receive antiretroviral therapy (are started on or continue previously initiated antiretroviral therapy)
- **Denominator** – All HIV-positive people with TB registered over the same given time period.
- **Purpose** – Output indicator to measure the commitment and capacity of TB service to ensure that HIV-positive people with TB are able to access antiretroviral therapy

C.5.1 Antiretroviral therapy

- **Methods** – data collection depends on who provides antiretroviral therapy
 - TB programme – a modified TB register or separate TB/HIV register with data reported at the end of TB treatment, to include everyone started on antiretroviral therapy during TB treatment.
 - HIV or other care services – requires a system to ensure that the TB programme is informed of referral outcome and recorded in a modified TB register or TB/HIV register
- **Periodicity** – collected continuously and reported with the quarterly cohort outcome data

C.5.1 Antiretroviral therapy

Strengths and limitations

- Diagnosis of TB is a major entry point for antiretroviral therapy
- Important for programme management and individual patient care
- Measures
 - degree to which antiretroviral therapy is part of the package of care for HIV-positive people with TB
 - accessibility of antiretroviral therapy to HIV-positive people with TB
 - drug availability
 - degree to which health care providers encourage antiretroviral therapy as a part of routine care
 - strength of the referral process between TB and HIV

C.5.1 Antiretroviral therapy

Strengths and limitations

- Does not measure
 - whether patients treated correctly,
 - at what point during TB treatment people are started on antiretroviral therapy
 - adherence
 - quality of treatment
 - impact of antiretroviral therapy
- The expected values will vary depending on national eligibility criteria for antiretroviral therapy, CD4 count availability

C.5.1 Antiretroviral therapy

- **Importance** – core. Data should be collected for this indicator even in settings where antiretroviral therapy is not available in the public sector, as this information is in itself important
- **Responsibility** – national HIV/AIDS control programme and national TB control programme
- **Measurement tools** – modified TB register, modified HIV care register or separate TB/HIV register with referral system (where appropriate)

Global milestones for tracking antiretroviral therapy scale-up

Global milestones...

Input and process

Level of monitoring and evaluation	Milestone	Data collection
Input	1. Resources for treatment and prevention	National accounts, funders
Process	2. Average price of antiretroviral drugs per person	Industry, country report
	3. Training (certification of competence)	Administrative records, country report
	4. Production and distribution of first-line antiretroviral drugs	Industry figures

Global milestones: output and outcome

Level of monitoring and evaluation	Milestone	Data collection
Output	5. Numbers trained to deliver antiretroviral therapy	Country reports, mission reports
	6. Number of outlets delivering antiretroviral therapy	Country reports, Service Availability Mapping, nongovernmental organizations
	7. Number of antenatal clinics delivering the prevention of mother-to-child transmission	Country reports, Service Availability Mapping, nongovernmental organizations
	8. Number of outlets providing counselling and testing	Country reports, Service Availability Mapping, nongovernmental organizations
Outcome	9. Children, women and men with advanced HIV receiving antiretroviral therapy	Country reports, site reporting, industry, nongovernmental organizations
	10. HIV drug resistance surveillance	Country reports

Global milestones: impact

Level of monitoring and evaluation	Milestone	Data collection
Impact	11. Survival among people living with HIV/AIDS receiving antiretroviral therapy	Clinical tracking system
	12. Age- and sex-specific AIDS mortality among adults	Vital registration, research studies, census, surveys
	13. HIV prevalence among young people and among high-risk populations	Surveillance and surveys

WHO specific milestones

Level of monitoring and evaluation	Milestone
Input	1. Additional financial resources allocated to universal access to antiretroviral therapy
	2. Staff deployed to countries by WHO
	3. Training packages and guidance documents
	4. Involvement of partner organizations in universal access
Process	5. Countries asking for WHO support
	6. Countries establishing universal access targets
	7. Countries using AMDS for procurement and distribution of drugs or diagnostics

Document 12.2

Introduction to the exercise for Unit 12

For this exercise, your facilitator will divide the participants into four groups. The purpose of the exercise is to prepare a plan for implementing selected indicators to monitor and evaluate the implementation of collaborative TB/HIV activities. The choice of the indicators depends on what collaborative activities have been chosen in a given country (or region) and how the activity is implemented.

- Select four indicators from *A guide to monitoring and evaluation for collaborative TB/HIV activities (11)* (one from each section – A to D) that would be used in the country (or region).
- For each indicator, the group should decide:
 - what information needs to be collected;
 - how to collect it – such as tools and resources;
 - how often to collect and report it;
 - how to analyse and produce results;
 - how to disseminate the results; and
 - who would use the results and for what purpose.
- Prepare to present one of your indicators in the plenary session.

Tell a facilitator when you are ready for the plenary discussion.

Unit 13: Costing and budgeting for the implementation of collaborative TB/HIV activities

Objectives

By the end of this unit, participants will be able:

- 1) to analyse the financial situation of a national TB control programme or national HIV/AIDS programme; and
 - 2) to prepare a draft budget for implementing collaborative TB/HIV activities.
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Methods

Plenary presentation: Costing and budgeting

Exercise

Plenary discussion

Materials

Document 13.1: Costing and budgeting for the implementation of collaborative TB/HIV activities (slides)

Document 13.2: Costing and budgeting for the implementation of collaborative TB/HIV activities (file)

Document 13.3: Exercise: Costing and budgeting

Document 13.1

Costing and budgeting for the implementation of TB/HIV collaborative activities

Document No. 13.1



TB/HIV course for managers at the national and subnational levels

1

Objectives of the unit

- To analyse the financial situation of a national TB control programme or a national HIV/AIDS control programme
- To prepare a draft budget for implementing collaborative TB/HIV activities

2

Proposal for the Global Fund to Fight AIDS, Tuberculosis and Malaria (*draft*)

The draft proposal of the national TB control programme includes four general objectives under the TB component:

- 1) To strengthen the health care system
- 2) To ensure and monitor 100% DOTS coverage
- 3) To ensure access to DOTS for vulnerable groups
- 4) To establish a monitoring and evaluation system

3

Strong points in the TB component

- Collaborative TB/HIV activities included
- Solid background documentation
- Relatively modest and realistic budget
- Log frame approach

4

Group work

- Each group works on one broad activity.
- A draft budget framework has been prepared in Excel format for each group (13.2).
- The proposed budget items should be discussed, obsolete ones should be deleted, new ones should be added and realistic budget lines must be developed.
- Unit costs should be checked for consistency.
- Quantities should be stated.
- The final budget should be prepared and presented in plenary (10 minutes).

5

Group 1: Objective 1

Broad activity 2:

- Building procurement and supply capacity management for collaborative TB/HIV activities

6

Group 2: Objective 2

Broad activity 1:

- Identifying infectious TB cases among HIV-positive people

7

Group 3: Objective 3

Broad activity 2:

- Preventing TB among people living with HIV/AIDS

8

Group 4: Objective 4

Broad activity 1:

- Monitoring and evaluating collaborative TB/HIV activities in 20 hospitals

9

Global Fund to Fight AIDS, Tuberculosis and Malaria \$ country budget						
Objective 3: To ensure access to DOTS components for vulnerable groups						
Service area 2: Preventing TB among people living with HIV/AIDS						
Budget item	Breakdown					Total
	Unit	Quantity	Unit cost			
Project Costs						
A. Human Resources						
1.	Service area coordinator	person	625	x	months	0
2.	Per diem payments for screening people living with HIV/AIDS	person	88	x	times	0
3.	Trainers' fee for screening	person	75	x	training sessions	0
Subtotal (A)						0
B. Infrastructure and equipment						
Subtotal (B)						-
C. Training						
1.	Workshops for TB/HIV guidelines	workshop	1,000			0
2.	Training for screening	training session	600			0
Subtotal (C)						0
D. Commodities and products						
1.	PPD for screening people living with HIV/AIDS	person	1	x	times	0
2.	Radiological examination for people living with HIV/AIDS	person	5	x	times	0
3.	Sputum examination for people living with HIV/AIDS	person	1	x	times	0
4.	Isoniazid treatment for people living with HIV/AIDS who have TB	persons	12			0
Subtotal (D)						0
E. Planning and administration costs						
						7%
Subtotal (E)						0
Total costs						-

Global Fund to Fight AIDS, Tuberculosis and Malaria Š country budget						
Objective 2: To ensure and maintain 100% DOT coverage in the country						
Broad objective 1: Identification of infectious TB cases among people living with HIV/AIDS						
Budget item	Breakdown					Total
	Unit	Quantity	Unit cost			
Project costs						
A. Human resources						
1. Service area coordinator	person		625 x		months	0
2. Service area assistant	person		375 x		months	0
3 Trainers' fees for training laboratory technicians on smear (1 day)	person		75 x		seminars	0
4 Supervision fees (quality assurance in the districts)	person		63 x		districts	0
Subtotal (A)						0
B. Infrastructure and equipment						
Subtotal (B)						-
C Training						
1 Training laboratory staff according to the guidelines on smear (1 day)	training session		650			0
Training laboratory staff according to the guidelines on culture and susceptibility (2 days)	training session		800			0

11

Principal Recipient:		Federal Ministry of Health									
Currency:		USD									
Objective 2. To develop collaborative TB/HIV activities in selected health facilities with voluntary counselling and testing service											
Objectives and broad activities	Responsible Institution	July to September 2003		October to December 2003		January to March 2004		April to June 2004		Total for the fiscal year	
		Milestones or indicators	Budget	Milestones or Indicators	Budget	Milestones or indicators	Budget	Milestones or Indicators	Budget		
Broad activity 1. Strengthen the capacity of Federal Ministry of Health to conduct collaborative TB/HIV activities	PASS, TLCT, APCT	Invoice of inputs purchased	80.000							80.000	
Broad Activity 2. Conducting needs assessment visits to the seven health facilities	TB/HIV Coordinator, TLCT, APCT, RTLC	Conduct seven needs assessment visits	15.000							15.000	
Broad Activity 3. Adoption of a standardized protocol or guideline for collaborative TB/HIV activities	TB/HIV Coordinator, TLCT, APCT, Mentor (CDC)	Final draft of training materials and modules	10.000	500 training materials and Modules printed and distributed	20.000					30.000	
Broad Activity 4. Conducting training of trainers and training of staff at the selected health facilities				Conduct training of trainers for 10 trainers	30.000	Conduct training for 100 health workers in the selected health facilities	50.000			80.000	
Broad Activity 5. Purchasing items required to initiate collaborative TB/HIV activities	PASS TLCT	Tender document floated and winner (s) identified	0	Invoice of drugs for the prevention and treatment of opportunistic infections (OIs)	190.000					190.000	
Broad Activity 6. Supervision	TLCT, APCT					Conduct four supervisory visits	7.000	Conduct four supervisory visits	7.000	14.000	
Broad Activity 7. Monitoring and evaluation for objective 2	TB/HIV Coordinator, TLCT, APCT	Progress report	2.500	Progress report	2.500	Progress report	2.500	Progress report	2.500	10.000	
Total Objective 2			107.500		242.500		59.500		9.500	419.000	
										12	

Document 13.2

Introduction to the Excel file

The Excel file provided includes a preliminary list of activities, a structure for the budget, a tentative unit cost for the activities proposed and formulas allowing calculations of subtotal and total costs.

Please see Document 13.3 for further instructions on how to perform the exercise.

Document 13.2

Global Fund to Fight AIDS, Tuberculosis and Malaria – country budget

Objective 1: To strengthen the health care system for controlling TB

Broad activity 2: Building procurement and supply capacity management for collaborative TB/HIV activities

Budget item	Breakdown			
	Unit	Quantity	Unit cost	Total
Project costs				
A. Human resources				
1. Service area coordinator for procurement	person		625 x months	0
2. Service area coordinator for drug management system	person		625 x months	0
3. Service area assistant	person		375 x months	0
4. Supervision fee for procurement on twice yearly	person		125 x visits	0
5. Supervision fee for drug management	person		125 x visits	0
6. Trainers fee	persons		75 x seminars	0
Subtotal (A)				0
B. Infrastructure and equipment				
1. Vehicle for Central Unit			31,250	-
2. Maintenance and repair cost			6,250	-
3. Insurance and registration			5,000	-
Subtotal (B)				0
C. Training				
1. Training of national TB control programme Central Unit on drug management (2 days)	training session		1,300	-
2. Training of TB nurses on drug management	training session		900	-
Subtotal (C)				-
D. Commodities and products				
1. Safety cabinets	devices		25,734	-
Maintenance of safety cabinets			500 x	-
2. UV lamps	devices		80	-
3. Microscopes	devices		2,500	-
4. Fluorescent microscopes	devices		7,000	-
5. Equipment for rapid culture	devices		100,000	-
6. Autoclaves	devices		3,000	-
7. Refrigerators	devices		780	-
8. X-ray machine	devices		100,000	-
9. Software for drug management system	sets		2,000	-
Reagents and consumables for				
11. bacteriological laboratories (smear, culture and susceptibility)	various		80,000 x	-
12. TB drugs – first line	drugs		45,000 x	-
Subtotal (D)				0
E. Planning and administration costs				
International consultant for drug management			4000 x	0
	7%			-
Subtotal (E)				0
Total costs				-

Global Fund to Fight AIDS, Tuberculosis and Malaria – country budget
Objective 2: To ensure and maintain 100% DOT coverage in the country
Broad objective 1: Identification of infectious TB cases among people living with HIV/AIDS

Budget item	Breakdown				Total
	Unit	Quantity	Unit cost		
Project costs					
A. Human Resources					
1. Service area coordinator	person		625 x	months	0
2. Service area assistant	person		375 x	months	0
Trainers' fees for training					
3 laboratory technicians on smear (1 day)	person	8	75 x	seminars	0
4 Supervision fees (quality assurance in the districts)	person		63 x	districts	0
1 Allowance for quality assurance		1	12	100 months	1,200
Subtotal (A)					1,200
B. Infrastructure and equipment					
1 Olympus binocular microscope with spare x100 bulbs		1	10	1,350	13,500
2 Reagents and consumables		1	8	100	800
Subtotal (B)					14,300
C Training					
Training laboratory staff					
1 according to guidelines on smear (5 days)		5	8	75	3,000
Training of laboratory staff according to the guidelines on culture and susceptibility (2 days)	training session			800	0
2 Logistics and administration		1	8	15	120
3 Facilitators		5	2	150	1,500
Subtotal (C)					4,620
D Commodities and products					
1 Development of guidelines on laboratory examinations	brochure			110	0
Subtotal (D)					-
E Planning and administration costs					20,120
International consultant 7 days per year for quality assurance in laboratory				4000	0
7%					1,408
Subtotal (E)					1,408
Total costs					21,528

Global Fund to Fight AIDS, Tuberculosis and Malaria – country budget

Objective 3: To ensure access to DOTs components for vulnerable groups

Service area 2: Preventing TB among people living with HIV/AIDS

Budget item	Breakdown			
	Unit	Quantity	Unit cost	Total
Project Costs				
A. Human Resources				
1. Service area coordinator	person		625 x months	0
2. Per diem payments for screening people living with HIV/AIDS	person		88 x times	0
3 Trainers' fee for screening	person		75 x training sessions	0
Subtotal (A)				0
B. Infrastructure and equipment				
Subtotal (B)				-
C Training				
1 Workshops for guidelines on TB/HIV	workshop		1,000	0
2 Training for screening	training session		600	0
Subtotal (C)				0
D Commodities and products				
1 PPD for screening of people living with HIV/AIDS	person		1 x times	0
2 Radiological examination for people living with HIV/AIDS	person		5 x times	0
3 Sputum examination for people living with HIV/AIDS	person		1 x times	0
4 Isoniazid treatment for people living with HIV/AIDS who have TB	person		12	0
Subtotal (D)				0
E Planning and administration costs				0
			7%	0
Subtotal (E)				0
Total costs				-

Global Fund to Fight AIDS, Tuberculosis and Malaria – country budget
Objective 4: To establish a Monitoring and evaluation system
Broad activity 1: Monitoring and evaluation of TB/HIV activities in 20 hospitals

Budget item	Breakdown				Total
	Units	Quantity	Unit cost		
Monitoring and evaluation costs					
A. Human resources					
1 Programme Manager			1,200	x months	0
2 Programme Assistant			500	x months	0
3 Supervisor team members – fee			150	x visits	0
Subtotal (A)					-
B. Infrastructure and equipment					
Subtotal (B)					-
C Training and planning					
1. Training of team at the central level and supervisory team in programme management and monitoring and evaluation			5,000	x training	0
Subtotal (C)					-
D Commodities and products					
1. Office stationery			2,500	x years	0
Subtotal (D)					-
E Monitoring and evaluation					
1. Supervision visits			150	x visits	0
2. External evaluation visits	visit		16,000	x	0
Subtotal (E)					-
F Administration costs					0
1 International assistance trainer			4,000	x times	0
7%					0
Subtotal (F)					0
Total costs					-

Budget for Fictitia. Annex 1. Suggested breakdown for training courses

All figures can be modified in the sheet; the totals are calculated automatically. Costs per item require consensus.

Initial training					
General health workers and district coordinators		Training of mid-level coordination staff		Training of trainers at the central level	
Items	No. or US\$	No. or US\$	No. or US\$	No. or US\$	No. or US\$
Number of courses	1	Number of courses	1	Number of courses	1
Duration of course	5	Duration of course	5	Duration of course	7
Districts per course	5	Experts per zone	1	Regions	6
Max. number of participants per course	30	Max. number of participants per course	25	Max. number of participants per course	25
Per diem health worker	8	Per diem participant	8	Per diem participant	8
Average transport health worker	12	Average transport participant	20	Average transport participant	40
Number of facilitators	2	Number of facilitators	2	Number of facilitators	3
Per diem facilitator	13	Per diem facilitator	20	Per diem facilitator	20
Transport facilitator	35	Transport facilitator	40	Transport facilitator	40
Number of drivers	1	Number of drivers	1	Number of drivers	1
Per diem drivers	6	Per diem drivers	6	Per diem drivers	7
Refreshments per person per day	4	Refreshments per person per day	5	Refreshments per person per day	5
Venue per day	20	Venue per day	40	Venue per day	40
Stationery per person	5	Stationery per person	5	Stationery per person	40
Total cost course(s) (US\$)	2,540	Total cost course(s) (US\$)	3,560	Total cost course(s) (US\$)	5,944
Cost of one course (US\$)	2,540	Cost of one course (US\$)	3,560	Cost of one course (US\$)	5,944

Principal recipient 12-month budget and workplans for year 1, July 2003–June 2004

Country:	National TB control programme – example
Disease:	TB
Grant number:	ETH-102-GO1-T-00
Principal recipient:	Federal Ministry of Health
Currency:	US\$

Objectives and broad activities	Reponsible institution	July to September 2003		October to December 2003		January to March 2004		April to June 2004		Total for the fiscal year
		Milestones or indicators	Budget	Milestones or indicators	Budget	Milestones or indicators	Budget	Milestones or indicators	Budget	
Broad activity 1. Strengthen the capacity of the Federal Ministry of Health to conduct collaborative TB/HIV activities	PASS, TLCT, APCT	Invoice of inputs purchased	80,000							80,000
Broad activity 2. Conducting needs assessment visits to the seven health facilities	TB/HIV Coordinator, TLCT, APCT, RTLC	Conduct seven needs assessment visits	15,000							15,000
Broad activity 3. Adopting a standardized protocol or guideline for collaborative TB/HIV activities	TB/HIV Coordinator, TLCT, APCT, Mentor (CDC)	Final draft of training materials and modules	10,000	500 training materials and modules printed and distributed	20,000					30,000
Broad activity 4. Conducting training of trainers and training of staff at the selected health facilities				Conduct training of 10 trainers	30,000	Conduct training for 100 health workers in the selected health facilities	50,000			80,000
Broad activity 5. Purchasing items required to initiate collaborative TB/HIV activities	PASS TLCT	Tender document floated and winner(s) identified	0	Invoice of drugs for preventing and treating opportunistic infections purchased	190,000					190,000
Broad Activity 6. Supervision	TLCT, APCT					Conduct four supervisory visits	7,000	Conduct four supervisory visits	7,000	14,000
Broad activity 7. Monitoring and evaluation for objective 2	TB/HIV Coordinator, TLCT, APCT	Progress report	2,500	Progress report	2,500	Progress report	2,500	Progress report	2,500	10,000
Total objective 2			107,500		242,500		59,500		9,500	419,000

Document 13.3

Introduction to the exercise for Unit 13

For this exercise, your facilitator will divide the participants into four groups. The purpose of the exercise is to complete a component of the budget for implementing collaborative TB/HIV activities.

- Within a national TB control programme or national HIV/AIDS programme, a draft budget for collaborative TB/HIV activities has been already prepared within the proposal submitted to the Global Fund to Fight AIDS, Tuberculosis and Malaria.
- Each group is assigned a specific component of the budget to complete.
- An Excel file is provided with a preliminary list of activities, a structure for the budget, a tentative unit cost for the activities proposed and formulas to allow calculations of subtotal and total costs.
- Within groups, participants should:
 - 1) complete the list of activities within the assigned component of the budget;
 - 2) assess whether the unit cost available is adequate;
 - 3) decide the number of units necessary; and
 - 4) complete the budget line and report in the plenary session.
- Prepare to present the budget component in the plenary session.

Tell a facilitator when you are ready for the plenary discussion.

Unit 14: Case study on delivering services for TB and HIV/AIDS – the example of Malawi

Objectives

By the end of this unit, participants will be able:

- 1) to analyse the organization of collaborative TB/HIV activities in a real country (Malawi);
 - 2) to review and comment on the experience and materials (plans, guidelines, manuals and forms) used in a selected country with experience in implementing collaborative TB/HIV activities; and
 - 3) to analyse the implementation of collaborative TB/HIV activities in the selected country and compare it with the experience (if any) of one's own country.
-

Methods

Plenary presentation: Malawi country experience
Plenary discussion

Materials

Document 14.1: Malawi country experience (slides)
Document 14.2: *Three-year development plan for the implementation of joint TB and HIV services in Malawi (12)*

Document 14.1

Malawi country experience

Document No. 14.1



TB/HIV course for managers at the national and subnational levels

1

Objectives of the unit

- To analyse how collaborative TB/HIV activities are organized in a real country
- To review and comment on the experience and materials (plans, guidelines, manuals and forms) used in collaborative TB/HIV activities in a selected country with experience in implementing collaborative TB/HIV activities
- To analyse the implementation of collaborative TB/HIV activities in the selected country and compare it with one's own country's experience (if any)

2

Can antiretroviral therapy be scaled up?

Enabling factors

- Funds to procure antiretroviral drugs
- Costs of generic drugs decreasing
- International and national momentum
- Consumer demand

Constraints

- Drug manufacturing and distribution capacity
- Health system infrastructure and monitoring capacity
- Human resources

3

The “medicalized model” in Africa

Physicians to deliver antiretroviral therapy

Choice of multiple drug regimens

Mandatory laboratory monitoring

“Liver function tests, full blood counts and CD4 counts”

Computers to track patient follow-up

will preclude rapid and massive scaling up

The key is simplicity

4

TB control structure is the model

- **Standardized diagnosis and case-finding**
(smear microscopy and well-defined types of TB)
- **Standardized treatment**
(three treatment categories to cover all types of TB)
- **Standardized recording and reporting system**
(treatment cards, registers, cohort analysis, monitoring)
- **Standardized system of procurement**
- **Management by paramedical officers**
- **Drugs free of charge for patients**

5

From policy to practice:

the case of Malawi

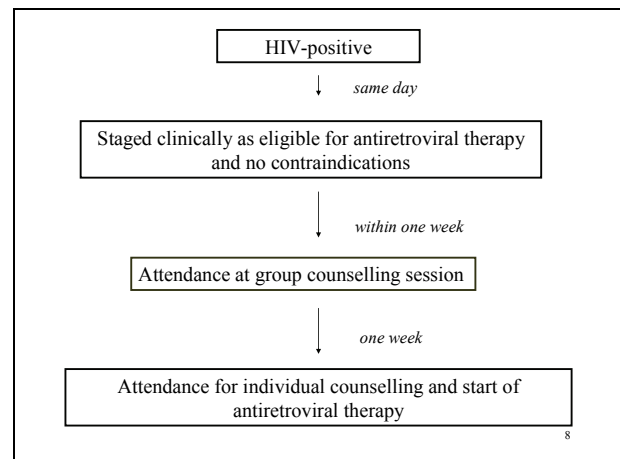
6

Standardized case-finding for antiretroviral therapy

People eligible for antiretroviral therapy:

- Positive HIV test
- WHO clinical stage III or IV
- (CD4 counts $<200/\text{mm}^3$ where applicable)

7



8

Standardized antiretroviral therapy

- First-line antiretroviral therapy:
Stavudine + lamivudine + nevirapine (fixed-drug combination)
- Alternative first-line antiretroviral therapy for side-effects:
Substitute zidovudine for stavudine (neuropathy)
Substitute efavirenz for nevirapine (skin or liver)
- Second-line antiretroviral therapy for first-line failure:
Zidovudine + didanosine + nelfinavir

9

First-line antiretroviral therapy only for country-wide scale-up in Malawi

- Stavudine + lamivudine + nevirapine is the only fixed-drug combination (one tablet twice daily)
- 85–90% of patients do well on this regimen
- First-line antiretroviral therapy simplifies:
 - drug procurement
 - drug security
 - patient management
 - system of recording and reporting
 - training of hospital staff

10

Promoting drug adherence

- TB Programme has for several years used “guardians” to support the initial phase of anti-TB treatment with rifampicin
- System for delivering antiretroviral therapy uses “guardians” to support the individual person receiving therapy– this implies disclosure of HIV status

11

Standardized registration, recording and reporting

12

Monitoring tools borrowed from the TB model

- Antiretroviral therapy patient treatment master card
- Antiretroviral therapy identity card for the patients
- Antiretroviral therapy patient register
- Antiretroviral therapy quarterly cohort analysis form
- Antiretroviral therapy monitoring forms for the national TB control programme regional officers

13

Antiretroviral therapy patient master card

↓
Every three months, update the register from the master card data

Antiretroviral therapy facility register

↓
Every three months, perform quarterly cohort analysis from the updated register

Antiretroviral therapy patient cohort analysis

14

Registration details

TB programme:

Specific TB registration number for each patient

Each facility starts each year with a new set of numbers:

MCH/01/2003

MCH/01/2004

Antiretroviral therapy:

Specific registration number for each person receiving antiretroviral therapy

Numbers just continue indefinitely, such as:

MCH/01

MCH/1027

15

Standardized treatment outcomes

TB programme

- Cured
- Treatment completed
- Dead
- Defaulted
- Failed
- Transferred out

Antiretroviral therapy

- Alive and receiving antiretroviral therapy
- Dead
- Defaulted
- Stopped treatment
- Transferred out

16

PATIENT MASTER RECORD CARD FOR ARV: Unique ARV Number CKW/ARV/01____ Year 2004____

Name_Mr Joshua Phiri____ Age 34____ Sex M____ Initial Wt (Kg) 48____ Transfer-In (Y/N) N____

Address (physical / PO Box) TA Mtemba, near Chikwawa Bona, Chikwawa District____

Name of identifiable guardian Mr John Phiri____

Date of starting 1st line ARV regimen (specify d4t/3TC/NVP formulation) Jul 14 -d4T-30mg____ Reason for ARV: Stage III (Pneumonia)____

Date of starting alternative 1st line ARV regimen (specify)____ Date of starting 2nd line ARV regimen (specify)____

yr	month	Date	Wt Kg	Outcome status				Of those alive		Ambulatory		Work/school		Side effects		No. Pills in Bottle	ARV Given		ARV not given
				A	D	DF	Stop	T	O	Start	Shs	Amb	Bed	Yes	No		Y	N	
2003	jan																		
	feb																		
	mar																		
	apr																		
	may																		
	jun																		
2004	jul	14	48	X				X		X	X				X				X
	aug	28	49	X				X		X	X				X	4			X
	sep	26	50	X				X		X	X				X	2			X
	oct	24	51	X				X		X	X		PN		4				X
	nov																		
	dec																		

17

Example of ARV IDENTITY CARD

Current Treatment Unit: _____

Name of Patient: Mr _____

Unique ARV Number: CKW/01

Age: 34 Sex: M Initial Weight (Kg): 48Kg

Start 1st line ARV therapy (date): _____

Reason for ARV therapy: Stage III (Pneumonia)

Start alternative 1st line ARV therapy (date) _____

Start 2nd line ARV therapy (date) _____

18

MINISTRY OF HEALTH AND POPULATION

ARV REGISTER BOOK

HOSPITAL: CHIKWAWA DISTRICT

19

ARV Registration Number	Year	Quarter	Date of registration	Name	Sex	Age	Address	Date first started ARV drugs	Reason for starting ARV drugs	Name of Guardian	ARV Treatment Unit
CKW/01	2004	3	July 14	Phiri	M	34	PO Box CMK	July 14	Stage III	John	CKW
CKW/02	2004	3	July 14	Nkhoma	F	29	TA 141	July 14	Stage III-PTB	Peter	CKW
CKW/03	2004	3	July 14	Kangombe	M	41	Montfort	July 14	Stage IV	JJW	CKW
CKW/04	2004	3	July 21	Tanbika	M	29	Nachalo	July 21	Stage IV-EPTB	ADH	CKW
CKW/05	2004	3	July 21	Gombe	F	27	TA 121	July 21	Stage III	Joshua	CKW

Reason for starting ARV Drugs: Stage III, Stage IV; CD4 count < 200/mm³, Stage II with TLC < 1200/mm³, Tuberculosis, Transfer-in

20

Outcome (provide dates when change from alive)					Of those alive			Ambulant		At work or school		Drug adherence > 95%	
Alive	Dead	Default	Stop	Transfer	Start	Substitute	Switch	Yes	No	Yes	No	Yes	No
X					X			X		X			
X					X			X			X		
X					X			X		X			
X					X			X			X		
X					X			X		X			

Alive - alive and on ARV drugs; Dead - whatever the cause; Default - not seen in three months;
 Stop - stopped treatment due to side effects/other;
 Transfer - transfer-out to another ARV treatment unit
 Start - on first line regimen; Substitute - changed to alternative first line regimen; Switch -
 changed to second line regimen
 Ambulant - yes/no: At work or school - at previous or new employment for adults
 Adherence > 95% - pill counts of 8 tablets or less when patient comes for review

21

ARV QUARTERLY COHORT ANALYSIS FORM

NAME OF TREATMENT UNIT _____ Thyolo DH
 COHORT [specify the year and the quarter] _____ 2003, Q2
 Total number of patients initially registered for ARV in the cohort _____ 116
 Year in which evaluation is taking place: _____ 2003
 Date at which evaluation is taking place _____ July 10th

Of total number registered in the cohort:

Number	Alive and on ARV therapy	106 (91%)
	[Alive and on First line regimen	101]
	[Alive and on Alternative first line regimen	5]
	[Alive and on Second line regimen	0]
	Dead	6
	Defaulted	0
	Stopped	4
	Transferred out to another treatment unit	0

Of those Alive:

Number	Ambulatory	106
	At work	No information
	With side effects	14
	With Pill count in bottle 8 or less	63/63

Note: Pill count in bottle 8 or less is equivalent to 95% adherence 22

Cohort analysis

- Every three months each cohort is analysed for its treatment outcomes
[this allows survival analysis to be conducted]
- Every three months all the cohort case numbers and treatment outcomes are combined together
[this allows cumulative up-to-date data]

23

Collecting the national antiretroviral therapy cohort data

- The national TB control programme conducts quarterly supervisory and monitoring visits to all TB treatment facilities in the country to collect case-finding and treatment outcome data
- There is no established system for HIV/AIDS
- HIV/AIDS data collection is therefore being piggy-backed on to TB data collection
- Details agreed with the Malawi national TB control programme

24

Cumulative analysis of patients starting antiretroviral therapy up to June 2004:

[Regional TB officers collected data from 11 hospitals in July–August]

Number of people starting therapy	Number of people starting antiretroviral therapy who are				
	Alive and on therapy	Dead	Defaulted	Stopped	Transferred
5558	4191 (75%)	446 (8%)	805 (14%)	46 (1%)	70 (2%)

25

Standardized procurement of drugs

<p><u>TB programme:</u></p> <ul style="list-style-type: none"> • Drug orders based on number of patients registered in previous 1–2 quarters plus a percentage to allow for increased case notifications • Drugs provided for “initial” and “continuation” phases 	<p><u>Antiretroviral drug delivery:</u></p> <ul style="list-style-type: none"> • Drug orders based on classifying units as: low burden (25/month) medium burden (50/month) high burden (150/month) • Drugs provided as “starter” and “continuation” packs
--	--

26

For the individual recipient of antiretroviral therapy

<p><u>The starter pack:</u></p> <p>This is designed to provide medication for the first 15 days of treatment:</p> <p>One tin of Triomune and one tin of Lamivir-S (each with 15 tablets)</p>	<p><u>The continuation pack:</u></p> <p>This is designed to provide medication for 30 days of continuing treatment:</p> <p>One tin of Triomune (60 tablets)</p>
---	--

27

Low-burden unit: antiretroviral drug packs for 75 people for 3 months

Starter pack: 3 months

60 tins Lamivir-30 (15 tablets)
15 tins Lamivir-40 (15 tablets)
60 tins Triomune-30 (15 tablets)
15 tins Triomune-40 (15 tablets)

Continuation pack: 3 months

180 tins Triomune-30 (60 tablets)
45 tins Triomune-40 (60 tablets)

28

Calculating antiretroviral drug needs for the 56 public facilities in Malawi

Number of public health facilities for antiretroviral therapy:

- 4 high-burden facilities
- 26 medium-burden facilities
- 26 low-burden facilities

National needs for one year:

- 400 starter packs
- 1320 continuation packs

29

Staff providing services at clinics

TB programme:

44 sites in public sector

4 clinical officers
6 nurses
28 health assistants
6 health surveillance assistants

Antiretroviral therapy delivery:

56 sites in public sector

6 physicians
50 clinical officers

30

Should antiretroviral drugs have user charges? (1)

The TB programme provides all anti-TB drugs free of user charges because:

- a) TB is a public health problem
- b) TB is an infectious disease
- c) long-term treatment – 6–8 months
- d) noncompliance or no adherence leads to drug resistance

31

Should antiretroviral drugs have user charges?(2)

Lilongwe Lighthouse:

- Users pay MK2500 per month
- High default rates approaching 40%
- High death rates of 15–20% because of late presentation due to costs

Thyolo – MSF District:

- Drugs are provided free of charge to users
- Low default rates of 0.7%
- Low death rates of 8%

32

Antiretroviral drugs will therefore be free of user charges in the public sector in Malawi

33

Conclusions

- DOTS has an excellent track record for TB control in resource-constrained settings
- The same model can be used for delivering antiretroviral therapy
- This should lead to many lives being saved and the risk of drug resistance being kept low
- What is the experience in your country?

34

Unit 15: Field visit to a local health facility providing preventive, diagnostic and treatment services for TB and HIV/AIDS

Objectives

By the end of this unit, participants will be able:

- 1) to conduct a field visit to a local health facility providing preventive, diagnostic and treatment services for TB and HIV/AIDS;
 - 2) to describe the organization of TB and HIV/AIDS services, including laboratory, recording and reporting and possible links between TB and HIV services; and
 - 3) to discuss opportunities to improve coordination between TB and HIV/AIDS services in the health facility visited and in their own countries.
-

Methods

Introduction to the site of the visit

Field visit

Plenary discussion

Materials

Document 15.1: Checklist for the field visit

Document 15.1

Checklist for the field visit

a) Services visited

TB/HIV clinic ___ Antiretroviral therapy clinic ___ TB clinic ___
 Voluntary counselling and testing room ___ Outpatient department ___ Laboratory ___
 Other (specify) _____
 Are the visited services available for both people with TB and people living with HIV/AIDS?
 yes ___ no ___

Comments

b) Collaborative TB/HIV activities implemented

Collaborative TB/HIV activity	Yes	No	Guide for comments
Establish mechanisms for collaboration			To be asked during the field visit
A1. Coordinating body for TB/HIV activities available			At which level? How is it composed? Comments:
A2. Surveillance of HIV prevalence among people with TB performed			Systematically performed? Are data available? Comments:
A3. Joint TB/HIV planning performed			How is it performed? Comments:
A4. Monitoring and evaluation conducted			How is it organized? Which indicators are used? Comments:
Decrease the burden of TB among people living with HIV/AIDS			To be asked and observed during the visit
B1. Intensified TB case-finding established			Where is it performed? How is it organized? Which screening tools are used? Comments:
B2. Isoniazid preventive therapy introduced			Where is it performed? How is it organized? Comments:
B3. TB infection control in health care and congregate settings ensured			How is it organized? Comments:
Decrease the burden of HIV/AIDS among people with TB			To be asked and observed during the visit
C1. HIV testing and counselling provided			Where is it performed? Is a rapid test used for testing? Is a HIV test algorithm available? How is counselling organized? Comments:
C2. HIV prevention methods introduced			Where is it performed? How is it organized? Comments:

C3. Co-trimoxazole preventive therapy introduced			Where is it performed? How is it organized? Comments:
C4. HIV/AIDS care and support ensured			Where is it performed? How is it organized? Comments:
C5. Antiretroviral therapy introduced			Where is it performed? How is it organized? Are guidelines available? Is it free of user charges? Which regimens are used? What are the criteria and timing for starting antiretroviral therapy among people with TB? Which antiretroviral therapy regimen is used for people with TB? Is treatment supervised? Are incentives given to enhance adherence? Is there a mechanism for referring people with TB/HIV at the end of TB treatment? Comments:

c) Specific issues

1) Recording and reporting

Are standardized forms and/or registers for TB/HIV collaboration available for:

TB/HIV yes___ no___; Antiretroviral therapy yes___ no___; TB yes___ no___;

Voluntary counselling and testing yes___ no___;

Comments:

2) Continuum of care

Are the some of the following activities implemented?

Link with community support organizations yes___ no___; Home-based care activities yes___ no___;

Peer group support yes___ no___; Involvement of nongovernmental organizations yes___ no___;

Nutrition support yes___ no___;

Comments:

3) Health education

Is health education on TB/HIV provided for patients and caregivers? Yes___ no___

Are there TB/HIV posters or brochures in the local languages? Yes___ no___

Comments:

d) Summary of the visit

Strengths	Weaknesses
Problems identified	
Suggested solutions or recommendations	

Unit 16: Individual finalization of plans for implementing collaborative TB/HIV activities

Objectives

By the end of this unit, participants will be able:

- 1) to review the contents of their draft plan for collaborative TB/HIV activities based on what has been learned in previous units; and
 - 2) to complete the draft plan for collaborative TB/HIV activities.
-

Methods

Individual work on plans

Materials

Document 2.1: How to prepare a plan for implementing collaborative TB/HIV activities (slides)

Unit 17: Discussion of plans for implementing collaborative TB/HIV activities

Objectives

By the end of this unit, participants will be able:

- 1) to review and discuss plans for implementing collaborative TB/HIV activities; and
 - 2) to identify the strengths and weaknesses of their own draft plans to be improved later.
-

Methods

Plenary presentation: Presentation of selected plans
Plenary discussion

Materials

Document 17.1: Criteria for assessing plans

Document 17.1

Criteria for assessing plans

The plans will be assessed based on the following criteria:

- 1) existence of a clear background providing the context for the activities proposed;
- 2) existence of clear:
 - goal
 - objectives
 - targets;
- 3) inclusion of collaborative TB/HIV activities that correspond to the context described in the background and are based on the *Interim policy on collaborative TB/HIV activities (6)*;
- 4) inclusion of indicators for each activity considered;
- 5) inclusion of the following for each activity of the plan:
 - responsible person or organization
 - description of the activity
 - product of the activity
 - budget per quarters; and
- 6) The plan following a logic and taking into consideration what was presented during the course.

Unit 18: Course evaluation

Objectives

By the end of the course, participants will have:

- 1) finalized their own plan for implementing collaborative TB/HIV activities;
 - 2) filled out an evaluation questionnaire (course evaluation form, Document 1.2/18.1); and
 - 3) synthesized verbally their opinions about the course.
-

Methods

Individual work on materials provided

Materials

Document 1.2/18.1: Course evaluation form (please see page 10)

Annex 1: The Democratic Republic of Fictitia, a country with a high TB and HIV burden

Document for group exercises and discussion, TB/HIV training course for managers

Introduction

The Democratic Republic of Fictitia is an ancient country situated in the south-east part of Afrasia. Fictitia borders Country A to the north and east and Country B to the east and south. The area of the country is 343 100 km², with a population density of 43.8 people per km². According to the National Statistical Agency of the Ministry of the Interior, the population was 9 188 400 on 1 January 2002. The estimated population in 2004 was 9 653 000 for the entire country and 987 900 for South City, the capital of the country. The national language is Fictik.

After gaining independence in early 1989, the country faced economic difficulties and endured a political and ethnic crisis that led to a civil war in the middle of 1989. The government could not concentrate on economic reforms until the General Peace Agreement was signed on 17 February 1995. The first Presidential election was held in June 1997, considered as the beginning of the reconstruction phase.

The currency used since independence is FIF (Fictitian fictik; US\$ 1 = FIF 1960 as of July 2005). The gross domestic product in 2001 was US\$ 260 per capita (US\$ 318 in 1998). According to the World Bank, about 80% of the population was considered to be poor in 2002.

Organization of the health system and infrastructure

In order to develop an accessible and affordable system on line with human and financial resources available in the country, in 1998 Fictitia reduced the public health system to 59 health districts serving the 98 administrative districts. The health structure has three levels, central, provincial and district, which includes primary health centres and district hospital. There is no public health management function at the regional level. The health district level consists of 59 district health departments with catchment populations of about 150 000 each. Currently 59 district hospitals are functioning with 3350 beds. There are 582 primary health centres (dispensaries) countrywide, including 65 in South City and 92 in the provincial cities. About 124 health centres have 808 beds, and 458 health centres have no beds. In addition to the dispensaries, there are also 759 health posts, whose staff is not paid by the Ministry of Health. The catchment population of each health centre is about 15 000. Where population density is low and there are geographical barriers to access, districts can also establish health posts smaller than health centres. The private sector (private clinics, laboratories, pharmacies and cabinets) is growing rapidly, especially in the main cities. The coverage plan identified that primary health centres should offer the minimum package of services and district and provincial hospitals complementary

packages of services. Health posts should offer community services or advance primary health services such as immunization once a week. When the minimum package of services is introduced, staff receive a course of training and then the facility receives regular drug supplies corresponding to the minimum package of services. In 2002, about 48% of health centres were offering the minimum package of services. This reflects the scale of the task of reforming a national health system, and there have also been delays in implementation. In 1998, the Essential Drug List was developed and adopted and is being revised every two years. The quality control laboratories of the Ministry of Health control drug quality. However, the existing laboratories do not comply with modern requirements and good manufacturing practices. Most of the TB drugs and antiretroviral drugs, including fixed-dose combinations, are available on the private market. Humanitarian aid provides most drugs. The Global Drug Facility has provided TB drugs for the entire country since last year in kits for categories 1 and 2 and in blister packs for the category 3 regimen.

National HIV/AIDS Programme

HIV/AIDS burden

HIV/AIDS is a recent priority health problem in Fictitia. The country faces an epidemic increase of AIDS among population groups engaging in high-risk behaviour such as sex workers together with an increase in the general population. Information on the HIV seroprevalence among antenatal clinic attendees has been available since the mid-1980s. The rate rose from 1.4% in 1992 to 12.2% in 2004. The HIV prevalence among blood donors increased from 0.3% in 1986 to 7.2% in 2000 and 12.6% in 2004. In 2004, 44% of sex workers tested in South City were HIV positive and 69% of sex workers tested in other major cities were HIV positive. In early 2005, 38% of people attending sexually transmitted infection clinics tested in five sites were HIV positive. A recent study showed that 50% of injecting drug users have acquired HIV. The recorded HIV prevalence among people with TB disease increased from 2.2% in 1992 to 29% in 2004.

The estimated numbers of people living with HIV/AIDS at the end of 2004 were 310 000 15–49 years old, including 140 000 women, and 40 000 0–15 years old.

Reported AIDS cases:

1987	1988	1993	1994	1999	2000	2002	2003	2004	2005
0	12	150	1985	3895	4962	4879	5796	6086	7543

An estimated 25 000 people died from AIDS in 2004.

An estimated 100 000 children younger than 15 years old were orphans (losing their mother or father because of AIDS) at the end of 2004.

HIV is currently mainly transmitted via heterosexual intercourse. Among sexually transmitted infections, morbidity from syphilis and gonorrhoea is quite high.

Heroin became available in South City in the mid-1990s and has modified the practice of the users who earlier had access to the more traditional opium smoking. The appearance of disposable syringes has also modified needle-sharing habits. A national programme for drug abuse control and harm reduction was established in January 1998 in South City. Easy access to injecting pharmaceutical drugs, heroin or opium is

clearly visible in major cities and to some extent in the entire country. Easy access to various drugs increases poly-drug addiction. However, socio-medical support and repression are not clearly distinguished, and sound detoxification and support structures are lacking.

About 50 000 people need antiretroviral therapy, including 15 000 needing both antiretroviral therapy and TB therapy.

Number of people living with HIV/AIDS receiving antiretroviral therapy.

2001	2002	2003	2004
0	300	1100	4100

The proportion of people receiving antiretroviral therapy who have TB is unknown.

HIV/AIDS response

The national response to the HIV epidemic had initially focused on disseminating information, changing behaviour and promoting condoms as well as supportive care for people living with HIV/AIDS. Despite the advent of effective antiretroviral therapy in affluent countries in the mid-1990s, access to such therapy has been very limited in Fictitia, and when available, the user fees have been too expensive for the average person. The government antiretroviral therapy programme for adults was conceived in 2001 and commenced in January 2002 with drugs and test kits procured for 1500 people. The antiretroviral therapy programme commenced in three national hospitals and two district hospitals. Five model centres are now used as centres of excellence for training, and 20 district centres deliver antiretroviral therapy. Fictitia started preventing mother-to-child transmission of HIV in 2001 with two model centres jointly managed by the Ministry of Health and UNICEF; this is now available in 35 district centres.

Fictitia's voluntary counselling and testing services are being scaled up outside South City: there are sites at three national hospitals, all nine provincial hospitals and 29 district hospitals. Blood safety remains a major concern. Managing sexually transmitted infections requires expanded efforts. Fictitia captured the *UNAIDS/WHO policy statement on HIV testing (1)*, recommending routinely offering HIV testing by health care provider to everyone with sexually transmitted infections, to pregnant women and in settings with a high prevalence of HIV infection. More research is needed to better understand the sexual behaviour contributing to the epidemic.

Policies on antiretroviral therapy

The government budget allocated for drug procurement is generally determined based on available resources without taking into account real drug needs. Antiretroviral drugs have not been registered but are used with authorization of the national drug regulatory authority.

Thanks to support from the Global Fund to Fight AIDS, Tuberculosis and Malaria and the United States Agency for International Development, the Ministry of Health purchased 1500 doses of antiretroviral drugs in 2001 and 5000 per year since 2004 (with loose tablets until 2002 and shifting to generics in two- and three-drug fixed-dose combinations in 2003). The first-line antiretroviral regimen and the programme for preventing mother-to-child transmission of HIV are stavudine + lamivudine +

nevirapine and stavudine + lamivudine + efavirenz using the following fixed-dose combinations: stavudine 30 mg + lamivudine 150 mg; stavudine 40 mg + lamivudine 150 mg; stavudine 30 mg + lamivudine 150 mg + nevirapine 200 mg; stavudine 40 mg + lamivudine 150 mg + nevirapine 200 mg; efavirenz 200 mg; nevirapine 200 mg. Drugs are stored in the Central Medical Store and the Central Medical Store delivers drugs within Fictitia directly to 59 districts 2–4 times per year. The United States Agency for International Development (USAID) and the World Bank Multi-Country HIV/AIDS Program (MAP) for Afrasia are discussing possibilities to procure patented antiretroviral drugs in India in 2005 depending on the TRIPS (Trade-related Aspects of Property Rights) Agreement.

The first-line regimen in South City is stavudine + lamivudine + efavirenz using patented drugs through support from the United States Agency for International Development (limited quantity). People with both TB and HIV/AIDS are eligible for the first-line regimen and start the TB regimen and antiretroviral therapy together. In case of opportunistic infection, antiretroviral therapy is postponed. The first-line regimen in the other pilot sites and the rest of the country is stavudine + lamivudine + nevirapine.

National antiretroviral therapy guidelines have been developed based on WHO clinical staging, clinical eligibility and first- and second-line antiretroviral therapy regimens. CD4 equipment is currently available only in two national hospitals and one provincial hospital. CD4 count is planned to be included in the antiretroviral therapy guidelines being developed.

The DOTS strategy should become an integral part of the HIV/AIDS home care programme where available. All health care staff, including full-time TB staff, TB relay and private practitioners are to be involved in weekly observed antiretroviral therapy.

National TB Control Programme

Introduction

DOTS started to be implemented in pilot sites in 1992 and expanded in a phased manner throughout Fictitia within five years. The first DOTS implementation plan (1992–1997) endorsed the DOTS strategy and expanded it in all hospitals of Fictitia. Full DOTS population coverage was reached in 1997. The second DOTS expansion plan for 1999–2004 decentralized TB services. A new 10-year plan for 2005–2015 to reach the Millennium Development Goals by 2015 is under development, including the revised DOTS strategy (TB/HIV, multi-drug resistance, contributing to health system strengthening, engaging all care providers, empowering patients and communities and promoting research will be included). All 59 district hospitals, 9 provincial hospitals and most of the functioning 582 health centres are currently applying the DOTS strategy. More than half the health centres developed village health relay providing home care for people with TB disease and people living with HIV/AIDS together with religious authorities and traditional healers. The DOTS strategy is considered one of the most successful decentralized and integrated activities in Fictitia. The reasons for this success include securing core functions (presented in the section on achievements) such as TB planning, financing, human resources capacity including training and supervision, drug supply, service delivery, monitoring and evaluation, information, education and communication and social mobilization.

The treatment success rate has exceeded 85% since the inception of DOTS. However,

case detection was always much lower than the global target of detecting 70% of smear-positive TB cases adopted by Fictitia in successive five-year plans.

Maintaining political commitment for TB control is a priority in Fictitia, the Prime Minister being the Chairman of the National Committee against Tuberculosis.

The National Health Sector Strategy for 2004–2008 has been developed, reflecting the future Plan for Tuberculosis and AIDS Control. Antiretroviral therapy is to be scaled up countrywide by 2008 within the framework of the extended “3 by 5” initiative.

TB control: description

DOTS is an integral part of the minimum package of services delivered through the primary health care network, which includes all public facilities and more than 1000 village health relays. Diagnosis is ensured following national guidelines. Two sputum samples are collected for each suspected case (smear done, culture and drug susceptibility testing in the provinces surrounding four major cities) and chest X-ray is performed. If TB is confirmed, examinations are repeated at 1, 2, 3, 5 and 6 months and at the end of treatment.

TB regimens are provided to everyone with TB, as follows:

- category 1: 2(RHZE)/4(RH) – (rifampicin + isoniazid + pyrazinamide + ethambutol) for two months followed by (rifampicin + isoniazid) for four months;
- category 2: 2S(RHZE)/1(RHZE)/5(RH)₃E₃ – streptomycin and (rifampicin + isoniazid + pyrazinamide + ethambutol) for two months, (rifampicin + isoniazid + pyrazinamide + ethambutol) for one month followed by (rifampicin + isoniazid) and ethambutol three times weekly for five months;
- category 3: 2(RHZ)/4(RH) – (rifampicin + isoniazid + pyrazinamide) for two months followed by (rifampicin + isoniazid) for four months; and
- category 4 for multi-drug resistance is not standardized.

Category 1 is in patient kit forms with a blister pack of four-drug fixed-dose combinations (150 mg rifampicin + 75 mg isoniazid + 400 mg pyrazinamide + 275 mg ethambutol) and two-drug fixed-dose combinations (150 mg rifampicin + 75 mg isoniazid).

Category 2 is in patient kit forms with blister packs of four-drug fixed-dose combinations (150 mg rifampicin + 75 mg isoniazid + 400 mg pyrazinamide + 275 mg ethambutol), two-drug fixed-dose combinations (150 mg rifampicin + 150 mg isoniazid) and 400 mg ethambutol, 60 syringes and water for injection vials.

Category 3 is in patient kits with blister packs of three-drug fixed-dose combinations (150 mg rifampicin + 75 mg isoniazid + 400 mg pyrazinamide) and two-drug fixed-dose combinations (150 mg rifampicin + 75 mg isoniazid).

Treatment for latent TB infection is provided to all people living with HIV/AIDS and other recent Mantoux tuberculin skin test converters (isoniazid, 5 mg per kg per day for 6–9 months, in which TB disease is clinically excluded). The Mantoux tuberculin skin test is performed in TB clinics, while treatment for latent TB infection is ensured by TB clinics or general health services in major cities. As the main research activity, a trial is ongoing comparing isoniazid for six months with isoniazid + moxifloxacin for three months, and a second project is aimed at evaluating a gamma-interferon-based test for the diagnosis of infection.

Drugs and laboratory supplies have been successfully maintained through Global Drug Facility TB drugs and laboratory kits purchased using the Global Fund to Fight AIDS, Tuberculosis and Malaria grant received in 2002, the private sector not being covered. Standardized TB case recording and reporting forms have been adopted nationwide. Reporting is accurate in the public sector but cannot produce consistent data on activity performed in the private and traditional sectors. Staff capacity development is an essential permanent activity that was secured during the DOTS expansion phase. Three quarters of the TB team at every level has been changed since DOTS implementation started. More than 250 health staff and 250 TB activists in the community are trained or refreshed yearly. Full-time and part-time TB professional posts have been secured at the central and district levels. However, human resources for TB remain insufficient to face the rapid increase in TB burden and activity. Specific supervision has always been secured and became again the only recognized supervision activity after joint supervision failed and was stopped in 2001. Fictitia has the worst TB epidemic in Afrasia, with 43 500 estimated new TB cases per year (451 per 100 000 population), which include an estimated 18 600 new smear-positive cases per year (193 per 100 000 population). TB mortality represents with AIDS one of the primary causes of mortality due to infectious disease, greater than meningitis and cholera outbreaks, or malaria. TB notification has more than doubled in less than five years due to better access and an unprecedented change in TB burden mainly due to HIV and TB coinfection. The importance given to TB control in the current health system has dramatically increased to face the rapid change in TB burden. Smear-positive TB notification increased 5–10% per year between 1998 and 2004 and seems to have tapered in the past one or two years. The incidence of notified smear-positive TB was 119 per 100 000 population in 2004. The prevalence of multi-drug-resistant TB is growing, being 5% in newly diagnosed cases in 2004. Treatment success among multi-drug-resistant TB cases is 50% (60% in those newly diagnosed and 40% in previously treated cases).

Table A1. TB case notification (2004), treatment outcome (2003) and DOTS coverage (2004) in Fictitia (population 9 653 000 in 2004)

TB case notification, 2004

Estimated number of TB cases	Officially reported number of TB cases	Estimated number sputum smear positive	Officially reported number sputum smear positive	% of sputum smear-positive cases detected by DOTS ^a	% of sputum smear-positive cases detected by non-DOTS	% of sputum smear-positive cases detected
43 500	14 542	18 631	11 488	62%	0%	62%

^aDOTS detection rate

Treatment outcomes for DOTS, 2003

Registered cases (new sputum smear positive)	Cured	Completed treatment	Defaulted	Failed	Died	Transferred out	% not evaluated
10 898	85.3%	0.4%	1.5%	4.7%	7.4%	0.7%	0.0%
Treatment success: 85.7%							

DOTS coverage

% of population covered by DOTS in 2004 ^a	Number of new districts introducing DOTS in 2004	Total number and % of districts implementing DOTS by 2004	Total number and % of health units implementing DOTS, 2004	National budget for TB control (per capita)
100%	0	59/59 (100%)	59 district hospitals + 5 HIV units	US\$ 0.25

^aAs reported in *WHO report 2002: global tuberculosis control – surveillance, planning, financing* (Geneva, WHO).

TB/HIV

HIV testing and counselling among TB cases initiated by health providers is delivered jointly in 50% of TB units in 28 districts. All 28 districts provide co-trimoxazole preventive therapy to people with HIV/AIDS and TB, and integrated TB and antiretroviral therapy services started in 2004 in three pilot sites. Everyone with TB is proposed an HIV rapid test through rapid pretest and post-test counselling services at voluntary counselling and testing centres when testing is not available in TB units. Acceptance rate for HIV testing ranges from 50% to 98%. At site 1, antiretroviral therapy eligibility is based on CD4 count (less than 350 per mm³) and viral load, and the first-line regimen is stavudine + lamivudine + efavirenz using patented drugs. People with TB and HIV/AIDS who are eligible start the TB regimen and antiretroviral therapy 2–4 weeks later. In case of opportunistic infection, antiretroviral therapy is postponed. CD4 count is monitored twice in the first year of treatment. The second-line regimen is not standardized and often based on available antiretroviral drugs. In 2004, 10 TB cases started antiretroviral therapy in site 1 with stavudine + lamivudine + nevirapine due to a shortage of efavirenz. Shortages of HIV rapid test kits occurred twice in 2004, for two and six weeks, respectively. At sites 2 and 3, eligibility for antiretroviral therapy is based on clinical staging, and the first-line regimen is stavudine + lamivudine + nevirapine with 5% stavudine + lamivudine + efavirenz for pregnant women and people with side-effects. Antiretroviral therapy is provided in the TB clinics after 10 weeks. CD4 is not monitored and recording is not standardized. Discussion on further transfer of people with TB and HIV/AIDS to the HIV clinics or to primary health facilities (dispensaries) after TB treatment is

completed is under discussion. TB is screened in all HIV units in 20 districts, in most of 30 centres for preventing mother-to-child transmission of HIV and some voluntary counselling and testing centres. HIV recording is not standardized, and the number of people suspected of having TB referred is unknown. Isoniazid preventive therapy is said to be proposed in all HIV units and centres for preventing mother-to-child transmission of HIV, but limited information is available. Five HIV units are providing DOTS in close collaboration with the nearest TB unit.

National financial support

The revised plan for HIV/AIDS control, including comprehensive care, was estimated to cost US\$ 217 million for 2003–2008. Fictitia has been successful in mobilizing resources for HIV/AIDS control. Regular budget allocation: US\$ 5.6 million (2004), US\$ 9.6 million (2005) (2% of the budget of the Ministry of Health is allocated for HIV/AIDS). In 2003, a grant agreement was signed with the Global Fund to Fight AIDS, Tuberculosis and Malaria for the allocation of US\$ 36 million over the next five years. Through its Multi-Country HIV/AIDS Program for Afrasia, the World Bank also approved an allocation of US\$ 25 million over four years. However, with an increasing epidemic burden, especially the need to deal with the growing numbers of HIV-positive people, additional external support is still needed. The following table reports (in millions of US dollars) the 2004–2005 financial plan:

Budget for HIV/AIDS and (TB) in millions of US dollars

Cost item	Global Fund 2004–2007	Government budget	World Bank Multi-Country HIV/AIDS Programme for Afrasia	Others	Total
1. Staff: national, technical assistance	2.0	10.8	2.0	0.8	15.6
2. Laboratory, reference laboratory, equipment and maintenance	2.5	0.5	0.0	0.5	3.5
3. Drugs (including distribution costs)	11.0	0.0	13.0	0.0	24.0
4. Psychosocial support	5.5	0.2	0	1.0	6.7
5. Programme and case management: supervision, transport, maintenance, recording and reporting, (excluding staff costs covered in 1 and laboratory costs covered in 2)	6.0	0.0	1.5	0.0	7.5
6. Training, including fellowship, conferences and meetings	1.2	0.0	2.5	0.0	3.7
7. Prevention (excluding those already identified above)	1.8	0.0	2.0	0.0	3.8

8. Operating costs of dedicated facilities: office equipment, building and maintenance (excluding staff included in 1 and those identified above)	4.0	0.7	3.0	0.0	7.7
9. Surveillance and research (excluding those identified above)	2.0	0.0	1.0	0.5	3.5
10. Miscellaneous	0.0	1.0	0.0	0.0	1.0
Total	36.0	13.2	25.0	2.8	77.0

Future challenges

Future challenges include overwhelmed TB and HIV units, low decentralization and community involvement, late and variable proportions of TB cases tested for HIV, irregular HIV test supply, delays for HIV-positive people with TB disease to access antiretroviral therapy, lack of an exit strategy to hand over antiretroviral therapy after TB treatment and limited availability of CD4 equipment in TB units.

On the HIV side, lack of standardized registration, lack of supervision, management supply, access to efavirenz, unclear implementation of isoniazid preventive therapy and intensified case-finding, poor adherence to antiretroviral therapy, unknown quality of antiretroviral therapy, inadequate antiretroviral therapy in the private sector and unknown levels of multi-drug-resistant HIV (reaching 1% countrywide) and multi-drug-resistant TB.

Annex 2. Abbreviations

AAI	Accelerated Access Initiative
AIDS	acquired immunodeficiency syndrome
AMDS	AIDS Medicines and Diagnostics Service
ARV	antiretroviral
ART	antiretroviral therapy
CMS	central medical store
DOT	directly observed therapy
DOTS	WHO-recommended strategy for controlling TB
GDF	Global Drug Facility
HAART	highly active antiretroviral therapy
HIV	human immunodeficiency virus
IEC	information, education and communication
IMAI	Integrated Management of Adolescent and Adult Illness
IMCI	Integrated Management of Childhood Illness
MTCT	mother-to-child transmission of HIV
NsRTI	nucleoside reverse-transcriptase inhibitors
NtRTI	nucleotide reverse-transcriptase inhibitors
NNRTI	non-nucleotide reverse-transcriptase inhibitors
PI	protease inhibitor
PMTCT	prevention of mother-to-child transmission of HIV
PTB	pulmonary tuberculosis
SS+	sputum smear positive
SS-	sputum smear negative
STI	sexually transmitted infection
SW	sex workers
TB	tuberculosis
UNAIDS	Joint United Nations Programme on HIV/AIDS
UNDP	United Nations Development Programme
UNFPA	United Nations Population Fund
UNICEF	United Nations Children's Fund
VCT	voluntary counselling and testing
WHO	World Health Organization

