Final report on a workshop to develop proposals for collaborative TB and HIV/AIDS programme activities

Nairobi, Kenya

11 - 15 February 2002

Writing team:

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Acknowledgements
WHO acknowledges the technical and financial contribution of USAID and CDC–GAP as well as other partners, IUATLD, KNCV, KIT and DFID, who contributed technical support to the workshop.
Technical review

ProTEST Pilot projects: Review of achievements, gaps and constraints
1999-2002
**GLOSSARY OF ABBREVIATIONS**

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>AFRO</td>
<td>WHO Regional Office for Africa</td>
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<tr>
<td>AIDS</td>
<td>Acquired Immunodeficiency Syndrome</td>
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<td>ARV</td>
<td>Anti-Retro Viral drugs</td>
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<td>CDC-GAP</td>
<td>Centers for Disease Control – Global AIDS Program (Atlanta, USA)</td>
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<td>DFID</td>
<td>Department for International Development (UK)</td>
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<td>DOTS</td>
<td>Strategy for TB control</td>
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<td>FHI</td>
<td>Family Health International</td>
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<td>HAART</td>
<td>Highly Active Anti-Retroviral Treatment</td>
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<td>HCW</td>
<td>Health Care Worker</td>
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<td>HIV</td>
<td>Human Immunodeficiency Virus</td>
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<td>IPT</td>
<td>Isoniazid Preventive Treatment</td>
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<td>IUATLD</td>
<td>International Union Against Tuberculosis and Lung Disease</td>
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<td>IVDU</td>
<td>IntraVenous Drug User</td>
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<td>KIT</td>
<td>Royal Tropical Institute (Netherlands)</td>
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<td>KNCV</td>
<td>Royal Netherlands Tuberculosis Association</td>
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<td>LHL</td>
<td>Norwegian Heart and Lung Association</td>
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<td>LSHTM</td>
<td>London School of Hygiene and Tropical Medicine</td>
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<tr>
<td>MDR-TB</td>
<td>Multidrug-resistant TB</td>
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<td>MTB</td>
<td><em>Mycobacterium tuberculosis</em></td>
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<td>MTCT</td>
<td>Mother To Child Transmission of HIV</td>
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<td>NACP</td>
<td>National AIDS Control Programme</td>
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<td>NORAD</td>
<td>Norwegian Agency for Development</td>
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<td>NTP</td>
<td>National Tuberculosis Programme</td>
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<tr>
<td>OI</td>
<td>Opportunistic Infection</td>
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<tr>
<td>PLWHA</td>
<td>People Living With HIV/AIDS</td>
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<td>PMTCT</td>
<td>Prevention of Mother To Child Transmission of HIV</td>
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<td>ProTEST</td>
<td>Initiative aimed at promoting voluntary counselling and testing for HIV as an entry point to access for a range of TB and HIV prevention and care interventions</td>
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<td>SAMRC</td>
<td>South African Medical Research Council</td>
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<tr>
<td>TB/HIV</td>
<td>The intersecting epidemics of TB and HIV</td>
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<td>UNAIDS</td>
<td>Joint United Nations Programme on HIV/AIDS</td>
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<td>USAID</td>
<td>United States Agency for International Development</td>
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<tr>
<td>VCT</td>
<td>Voluntary Counselling and Testing (for HIV)</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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<td>WPRO</td>
<td>WHO Regional Office for the Western Pacific</td>
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Executive Summary

The interaction between TB and HIV/AIDS has implications for TB control in high HIV prevalence settings. Since HIV is fuelling the TB epidemic, prevention of HIV is crucial for TB control. Since TB is a leading cause of morbidity and mortality in HIV-infected individuals, the management of TB is a substantial part of HIV/AIDS care. The Global TB/HIV working group, coordinated by WHO, is one of 6 working groups of the Global STOP TB partnership. At its first meeting in Geneva in April 2001, the working group endorsed the WHO “Strategic framework to decrease the burden of TB/HIV” and recommended effective TB and HIV programme collaboration in order to implement the new strategy for TB control in high HIV prevalence settings. The new strategy of expanded scope consists of interventions directly against TB and interventions against HIV (and therefore indirectly against TB).

In promoting collaborative TB and HIV programme activities, WHO’s activities build upon experience gained since 1999 through the “ProTEST” Initiative. This operational research initiative has aimed to develop a district-based approach to decrease the burden of TB/HIV. In order to implement the new strategy of extended scope in countries badly affected by TB/HIV, Ministries of Health need to develop plans for implementing these interventions. Since it is not possible to implement the interventions immediately across an entire country, a step by step (i.e. phased) approach is necessary, starting with implementation in one or two initial sites and using lessons learned from these sites to expand implementation step by step until achieving nationwide coverage. WHO (HQ, AFRO and Kenya country office) convened the workshop in Nairobi in order for selected countries to develop proposals for phased implementation of collaborative TB and HIV programme activities. The selected countries represented at the workshop were Ethiopia, Kenya, Malawi, Mozambique, South Africa, Uganda, United Republic of Tanzania and Zambia, selected on account of the large number of HIV-positive TB cases in each country. Four of these countries (Malawi, South Africa, Uganda and Zambia) have already undertaken ProTEST projects in a limited number of districts.

On days 1 and 2, participants discussed the global TB/HIV strategic framework (including the interventions available and the principles underlying TB and HIV programme collaboration), the experience from the field (including the ProTEST projects), and mathematical modelling of the impact of available interventions on TB/HIV. On days 3 – 5, the representatives from each country worked in small groups with facilitators to develop a first complete draft proposal for collaborative TB and HIV programme activities in their country.

At the end of the workshop, all 8 countries had prepared a draft proposal. Finalisation of these proposals requires further work in each country involving all key stakeholders. As the secretariat of the Global TB/HIV Working Group, WHO will convene a scientific panel to review the proposals and will help to broker funds to support implementation of those proposals approved by the scientific panel. The meeting ended with the following recommendations and next steps for implementing joint TB and HIV programme activities:
1. Countries to finalise proposals
   • Countries starting joint activities (Ethiopia, Kenya, Mozambique and United Republic of Tanzania) to submit plans to WHO by the end of July 2002
   • Countries already involved in ProTEST projects (Malawi, South Africa, Uganda and Zambia) to submit expansion plans by the end of April 2002.

2. WHO to coordinate mentors to assist countries in finalising their proposals.

3. WHO to make funds available to support in each country national stakeholders’ workshop for proposal finalisation.

4. WHO to provide technical support to countries to adopt standard means of monitoring and evaluation of the impact of programme collaboration in different countries to facilitate data collection and analysis and ensure the comparability of results. It is anticipated that WHO and partner agencies will monitor and evaluate the impact of collaboration in these selected countries.

5. WHO in coordination with partner agencies to adapt a training manual for use in training schemes.

Main report

1. Background

The interaction between TB and HIV/AIDS has implications for TB control in high HIV prevalence settings. Since HIV is fuelling the TB epidemic, prevention of HIV is crucial for TB control. Since TB is a leading cause of morbidity and mortality in HIV-infected individuals, the management of TB is a substantial part of HIV/AIDS care. The unprecedented scale of the epidemic of HIV-related TB demands effective and urgent action. The strategic goal is to reduce TB transmission, morbidity and mortality (while minimising the risk of anti-TB drug resistance), as part of overall efforts to reduce HIV-related morbidity and mortality in high HIV prevalence populations. Achieving this goal will require scaling up of current efforts to implement interventions of proven effectiveness, and research to determine how to implement these interventions and monitor their impact. It will also require research to develop and improve new interventions, including specific TB control tools, e.g. a more effective vaccine, better diagnostic tests and preventive and therapeutic approaches.

The Global TB/HIV working group, coordinated by WHO, is one of 6 working groups of the Global STOP TB partnership. At its first meeting in Geneva in April 2001, the working group endorsed the WHO “Strategic framework to decrease the burden of TB/HIV” and recommended effective TB and HIV programme collaboration in order to implement the new strategy for TB control in high HIV prevalence settings. The expanded scope of the new strategy for TB control in high HIV prevalence populations comprises interventions against TB (intensified case-finding, cure and TB preventive treatment) and interventions against HIV (and therefore indirectly against TB), e.g. condoms, STI treatment, prevention of other HIV-related diseases, safe injecting drug use (IDU) and highly active anti-retroviral treatment (HAART).

In promoting collaborative TB and HIV programme activities, WHO’s activities build upon experience gained since 1999 through the “ProTEST” Initiative. This operational research initiative has aimed to develop a district-based approach to decrease the burden of TB/HIV. In order to implement the new strategy of extended scope in countries badly affected by TB/HIV, Ministries of Health need to develop plans for implementing these interventions. Since it is not possible to implement the interventions immediately across an entire country, a step by step (i.e. phased) approach is necessary, starting with implementation in one or two initial sites and using lessons learned from these sites to expand implementation step by step until achieving nationwide coverage.

There are several important constraints to implementation of collaborative TB and HIV programme activities. The scale of the experience generated so far, including the ProTEST projects, is small. None of the countries involved in the ProTEST initiative has experience so far of public sector provision of HAART. The countries most badly affected by TB/HIV generally have weak health infrastructure and limited human resources.

However, recent events hold out some encouraging developments. The cost of antiretroviral (ARV) drugs has substantially fallen over the past two years. The establishment of the Global Fund against AIDS Tuberculosis and Malaria represents increased international and national commitment to these priority communicable diseases of poverty. This increased interest of governments and other stakeholders in implementing
HIV/AIDS prevention and care services, if properly coordinated and matched by significantly increased funding, has the potential to make a difference to the lives of those affected by TB/HIV.

WHO (HQ, AFRO and Kenya country office) convened the workshop in Nairobi in order for selected countries to develop proposals for phased implementation of collaborative TB and HIV programme activities. The workshop brought together a large group of experts from 9 countries in Southern and Eastern Africa badly affected by TB/HIV (Botswana, Ethiopia, Kenya, Malawi, Mozambique, South Africa, Uganda and Zambia) selected on account of the large number of HIV-positive TB cases in each country. Of these, Botswana has some experience with the implementation of joint HIV/TB activities through a PMTCT programme; South Africa, Malawi and Zambia have piloted ProTEST projects; Uganda is experienced in evaluating the operational feasibility of providing VCT services, preventive services with INH and IEC services for HIV/TB infected people; Ethiopia, Tanzania and Mozambique have little experience with implementing collaborative HIV/TB programme activities; and Kenya has recently started a project similar to ProTEST in Mombasa. This expertise was complemented by staff from agencies collaborating with WHO, including IUATLD, CDC-GAP, USAID, KNCV, KIT, Norwegian Heart and Lung Association. USAID country representatives participated to gain an increased understanding of TB/HIV issues and to advise country teams on how to work with USAID as a funding agency.

2. Workshop objectives and outcomes

2.1 Overall objective
To strengthen the capacity of participating member States (Ethiopia, Kenya, Malawi, Mozambique, South Africa, Tanzania, Uganda and Zambia) to effectively manage the dual TB and HIV/AIDS epidemics.

2.2 Specific objectives
1. To promote phased implementation of collaborative TB and HIV/AIDS programme activities in participating countries

2. To encourage USAID mission officers and CDC-GAP program directors to participate in discussions on TB/HIV collaboration and identify resources to support joint interventions in countries

3. To develop country specific proposals and plans of work for phased implementation of collaborative TB and HIV/AIDS program activities.

3. Expected outcomes of the meeting

1. Rationale and evidence for collaborative implementation of TB/HIV control interventions documented.

2. Networking and ongoing communication fostered between country group team members involved in TB/HIV activities at the country level.

3. Involvement of USAID mission officers and CDC GAP program directors in discussions on TB/HIV collaboration.
4. Identification of potential resources to support joint TB/HIV activities in countries from USAID mission officers and CDC GAP program directors.

5. Country specific proposals and work plans for phased implementation of collaborative TB and HIV programme activities

4. Process

The first 2 days were dedicated to ensuring that all participants were familiar with the objectives, activities and achievements of collaborative TB and HIV programmes especially, the ProTEST projects. This was done through a series of plenary presentations from countries with ongoing experience in the area of joint TB/HIV activities, and presentations from technical partners. The partners explained their scope of work, objectives, and potential support for the development of collaborative TB and HIV/AIDS programme activities.

Days 3-5 focused on proposal writing by country teams assisted by mentors from various technical agencies. The mentors were chosen in such a way that countries would benefit from good technical expertise and country experience, while at the same time benefiting from already pre-existing professional relationships between countries and technical support agencies.

After each step in proposal writing country teams would assemble to share their plans with all participants. These country-report-back sessions were interspersed with formal presentations on selected issues, and led to various important discussions about technical and policy matters. By the end of day 5 all countries had formulated new or improved work plans, reflecting the various stages of development of joint HIV-TB activities in their countries. South Africa improved on their already existing plan, which aims to cover all districts in the country by 2005.

Malawi and Zambia improved on their existing plans for expansion despite enormous constraints in capacity and funding in those countries. Mozambique presented a plan for the first phase of formulation of National TB/HIV plan, including the first TB/HIV in-country stakeholder workshop for achieving consensus and developing an TB/HIV coordinating mechanisms. Tanzania improved on an already existing first draft TB/HIV collaboration plan, that comprises the gradual implementation of VCT services combined with prevention, care and support services for people dually infected with TB/HIV. This includes the provision of ARVs. Kenya formulated a comprehensive plan, building on already ongoing initiatives and activities (in Mombasa). The very recently formulated Ethiopian plan was further improved with a focus on VCT expansion and phased implementation of basic TB/HIV prevention and care services in appropriate VCT centres.

CDC-GAP programme directors and USAID mission officers were made aware of the scope of ongoing and planned TB/HIV collaborative programme activities and of the potential for joint support with WHO towards optimising these activities. Through interaction with the country teams, CDC-GAP and USAID were able to gather specific information regarding joint TB HIV programmes the duration of the activities, human and material resource requirements, current funding gaps and ongoing donor support.
5. Concise report of presentations and discussions on days 1 and 2

Day 1 started with presentations focused on setting the stage of the workshop, pointing out the rationale and justification, the objectives and expected outcomes. Speakers stressed the emphasis of the workshop on producing concrete results, in the form of country proposals, by the end of the workshop, with follow-up action in countries to implement these proposals. The opportunity offered by increased commitment both from international bodies and governments in rich and poor countries offers a window of opportunity that should not be wasted. The workshop should generate proposals for innovative action, aimed at improving the quality of care of PWHAs. All speakers stressed the need to move forward and to act.

After the opening session by the Minister for Health of Kenya, the Permanent Secretary in the Ministry of Health and the Director Medical Services, the workshop continued with sessions on the ongoing WHO and UNAIDS technical policy work. WHO/AFRO staff described the status of both the HIV/AIDS and TB epidemics in Africa, reiterating that while the interventions for both HIV/AIDS and TB control were well known, implementation was still far from sufficient. The basic interventions for HIV/AIDS (prevention, behaviour change etc) and TB control (DOTS) need to become more responsive to opportunities and requirements for increasing care and support of people dually infected.

Malawi, South Africa and Zambia presented current achievements, challenges and constraints in implementing ProTEST pilot projects. Malawi has mainly concentrated on building a collaborative network between the various stakeholders in the capital Lilongwe. Scaling up ProTEST activities in Malawi have been impeded by the sub-optimally functioning national AIDS control Programme. The South African ProTEST project is well advanced in achieving its objectives and ownership by the National Department of Health, is expressed through the three-year expansion plan that is aimed at establishing joint TB/HIV programme activities in all districts of the country by 2005. Zambia is struggling with the challenge of expansion of successful pilots to other districts against the backdrop of a health sector reform and sector wide approach, which appears unfavourable to vertical programmes.

Problems documented through the field experiences were: sub-optimal adherence to IPT (25% in Malawi, 60% in South-Africa), an unmet demand for VCT due to inadequate counselling and testing capacity, concern about quality of counselling, frequent burn-out of counsellors in the absence of peer support systems, reluctance of community-DOTS supervisors to be associated with HIV/AIDS. Experience with CPT in all three countries was limited, but promotion of CPT and VCT for TB patients had resulted in a very low uptake in Lilongwe (15%). TB workers appeared reluctant and inhibited to discuss HIV/AIDS with their patients and promote VCT and CPT.

Uganda and Zambia presented experiences in evaluating efficacy and effectiveness of IPT in a scientific trial. These experiences, which were well documented and published - showed overall, a moderate to poor adherence rate (maximum 60%). The protective efficacy of IPT is estimated at 40-60% (depending on PPD status). Discussion emerged around the most efficient screening procedure for exclusion of active TB, with Zambia providing evidence that screening on the basis of absence of any signs and symptoms of
TB was cost-effective and safe. Botswana shared the very positive experience of introducing joint HIV/TB activities within the VCT system, including the implementation of PMTCT, and the identification of TB patients as a priority group for ARV therapy.

South Africa related its experience in working with the district management team to get them engaged in joint HIV/TB activities. This highly successful approach will now be adapted for the scaling up of ProTEST activities countrywide by 2005. Keywords of this approach are devolution, decentralisation of care to the lowest possible level of care, integration of services where this is efficient and feasible.

A presentation about pertinent research questions then followed. The Global TB/HIV Working Group has endorsed the priority research needs to decrease the burden of TB/HIV set out in the “Strategic framework to decrease then burden of TB/HIV”. Research priorities include operational issues. Achieving the goal of a decreased TB/HIV burden will require scaling up of current efforts to implement interventions of proven effectiveness, and research to determine how to implement these interventions and monitor their impact. It is necessary to investigate the feasibility, adherence, and duration of the protective effect and the impact of IPT on TB burden in high HIV prevalence settings. The potential impact of HAART as an intervention that may replace IPT to prevent first-ever episode of TB was also discussed.

The afternoon ended with a discussion on ethical considerations in implementing joint HIV-TB activities, raising the question about the boundaries of research and programme implementation. While the evidence base for some of the interventions in sub-Saharan Africa is inadequate, there is an urgent need to offer preventive and curative services for the millions of people infected by HIV. The ethical challenge is in the balance between promoting interventions supported by little evidence and the moral imperative to provide prevention and care.

During the final discussion session on day 1 important operational issues in implementation were highlighted. South Africa stressed the need for clear criteria when deciding to expand phased implementation activities. While it was not easy to foster collaboration between HIV/AIDS and TB programmes, once the benefits of this collaboration were made clear, collaboration became easier. A clear management structure was the most important pre-requisite for success of phased implementation of activities. Others indicated that too much emphasis on piloting would cause long delays in implementation of services. There was some discussion about the need for integration at service level (districts) with collaboration at the central and policy levels for TB and HIV/AIDS programmes. The feeling was that with increased operationalisation of joint activities, the TB and HIV/AIDS programmes would evolve to the most optimal method for delivering joint services.

Day 2 started with a comprehensive presentation on the requirements to control HIV associated TB in sub-Saharan Africa. HIV/AIDS should be emphasised in selected countries as a major health crisis requiring innovative approaches for effective control. Knowledge about one’s HIV status should become the social norm and an accessible ARV program would need to be in place. TB programmes would need to redefine their activities, including intensified case finding with preventive treatment for latent infection and treatment for active TB. Both programs will eventually need to provide optimal prevention and care services for dually infected people. It is further expected that integration of services offered by both programmes at district level will serve to improve the available general health care services.
This was followed by a sequence of presentations about the merits of mathematical modelling as a tool to test policy hypotheses and guide policy decisions. Countries were then assigned in breakout sessions to make inventories of the current position of joint TB/HIV activities and identify additional steps and activities to be undertaken. All 8 countries presented overviews of current joint TB/HIV activities in their countries, and this led to short discussions and questions. This session was largely aimed at information sharing and documentation of joint TB/HIV activities that would inform phased implementation activities. This session also provided an example of how different countries handled similar concepts in developing policy. Additional presentations highlighted the positions and mandates of the various agencies collaborating with WHO (IUATLD, CDC-GAP, KIT, KNCV, USAID, DFID). This was complemented by presentations on methodological issues, proposal writing, monitoring and evaluation, economic analysis, data collection and analysis.

**Days 3 – 5** There were devoted to development of the first draft proposal by all 8 countries. Draft proposals have been submitted to the WHO secretariat and final proposals are expected from all countries by the end of July 2002.

**6. Next steps**

1) All country teams will organize national stakeholder meetings upon return to ensure wide participation and consensus on plans for collaborative TB and HIV programme activities.

2) USAID indicated that their country missions would welcome proposals for funding, and advice was given on procedures and requirements for such funding.

3) WHO indicated the availability of seed funds to help kick-start the activities in each country. In addition they would assist countries by brokering additional funds through other technical partners and donors. WHO secretariat undertook to coordinate these activities with technical partners. This would also include fostering a network and improving communications between the various country team members involved in TB/HIV activities in the 8 countries currently identified.

4) Technical mentoring teams were agreed upon per country, which will provide technical and mentoring support to countries.

**7. Time frame**

A time frame was agreed. By July 2002 countries would have proposals ready for submission to a scientific panel, comprising experts convened from the Global TB/HIV working group.

By September 2002 all successfully reviewed plans should be funded and more funds brokered through WHO to sustain activities.

By December 2002 all countries should have started implementation of their Joint HIV-TB plan.
Further reading

Strategic Framework to Decrease the Burden of TB/HIV
WHO/CDS/TB/2002.296

First Meeting of Global Working Group on TB/HIV, 9-11 April 2001, Geneva
WHO/CDS/TB/2001.293
WHO/HIV_AIDS/2002.2

An Analysis of Interaction between TB and HIV/AIDS Programmes in Sub-Saharan Africa
WHO/CDS/TB/2001.294
Objectives of the proposed meeting are as follows:

- **Overall Objective:**
  
  To strengthen the capacity of participating member States (Ethiopia, Kenya, Malawi, Mozambique, South Africa, Tanzania, Uganda) to effectively manage the dual TB and HIV/AIDS epidemics.

- **Specific Objectives:**
  
  1. To promote phased implementation of collaborative TB & HIV/AIDS programme activities in participating countries.
  
  2. To identify opportunities for collaboration with USAID mission officers and CDC programme directors and identify resources to support joint interventions in countries.
  
  3. To develop country specific proposals and plans of work for phased implementation of collaborative TB & HIV/AIDS programme activities.

Expected outcomes of the meeting are as follows:

1. Rationale and evidence for the phased implementation of collaborative TB/HIV/AIDS programme interventions documented.

2. Fostered networking and ongoing communication between country group team members involved in TB/HIV activities at the country level.

3. Involvement of USAID mission officers and CDC programme directors in discussions on TB/HIV collaboration.

4. Identification of potential resources to support joint TB/HIV/AIDS activities in countries from USAID mission officers and CDC programme directors.

5. Country specific proposals and work plans for phased implementation of collaborative TB/HIV/AIDS programme activities.

**Contributing partners**

_Funding and preparations for this workshop have been provided jointly by WHO, USAID and CDC._
Day 1 – Monday, 11 February 2002

08.00-08.50: Introductory remarks, objectives and expected outcomes.

08.00 - 08.30 Registration of participants

08.30 - 08.35 Introductory remarks
   Dr E. Nyarko, WHO

08.35 – 08.45 Objectives and expected outcomes of the workshop
   Drs P. Onyebujoh/W Nkhoma WHO

08.45 - 08.50 Election of officers/adoption of programme of work
   Chairperson

10.00 – 10.30
Official Opening
Introduction of Minister and Perm Sec MOH Kenya (WR Kenya)
Opening address by Minister

0850-11.30: Session 1: Objective: Situation analysis and strategic plans

08.50 - 09.10 Overview of HIV/AIDS situation and strategic plan for control in the African Region
   Dr M Moeti, WHO

09.10 - 09.30 Overview of the TB situation and strategic plan for control in African Region
   Dr E Nyarko, WHO

09.30 – 10.00 Strategic approach to decrease the burden of TB/HIV (the rationale for TB/HIV collaboration)
   Dr D Maher, WHO

10.30 – 11.00 Tea/Coffee Break

11.00 – 11.30 An overview of the CDC and USAID strategic directions regarding TB/HIV
   Drs C. Davis, USAID and B. Miller, CDC

11.30 - 17.00: Session 2: Objective: To describe TB/HIV field experience: the ProTEST Projects

11.30 - 11.45 Achievements, gaps and next steps
   Dr P. Onyebujoh, WHO

11.45 – 12.00 The Malawi Project
   Mr R. Chimzizi CHSU

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<tr>
<th>Time</th>
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<tr>
<td>12.00 – 12.15</td>
<td>The South African Project</td>
<td>Drs H. Hausler and P. Naidoo South African DOH</td>
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<td>12.15 - 12.30</td>
<td>The Zambian Project</td>
<td>Dr R. Ginwala, Zambart Project</td>
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<td><strong>12.30-13.00: Other experience</strong></td>
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<td>12.30 - 12.45</td>
<td>IPT provision and VCT: the Ugandan experience</td>
<td>Dr B. Mugisha, MOH Uganda</td>
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<td>12.45 – 13.00</td>
<td>TB Preventive therapy: The Zambian experience</td>
<td>Dr A. Mwinga, CDC</td>
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<td>12.30 - 12.45</td>
<td>Linking TB and HIV services: The Botswana experience</td>
<td>Dr T. Moeti, MOH Botswana</td>
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<td>12.45 - 13.00</td>
<td>The Community TB Care Initiative in Africa</td>
<td>Dr W. Nkhoma, WHO</td>
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<td>13.00 - 14.00</td>
<td>Lunch break</td>
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<td>14.00 - 14.30</td>
<td>Working with NGOs in HIV/AIDS control: the USAID experience</td>
<td>Dr C. Davis, USAID</td>
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<td><strong>14.30 - 17.00 Session 3: Objective: Synthesis of experience so far</strong></td>
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<td>14.30 - 15.00</td>
<td>Guideline for phased implementation of TB/HIV collaborative activities</td>
<td>Drs P Onyebujoh/ F Scano, WHO</td>
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<td>15.00 – 15.30</td>
<td>Forming TB/HIV management team: the district experience</td>
<td>Mr K. Bellis</td>
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<td>15.30-16.00</td>
<td>Translating research findings into policy and practice</td>
<td>Dr B Miller, CDC</td>
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<td>16.00 - 16.30</td>
<td>Tea/Coffee break</td>
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<td>16.30 - 17.00</td>
<td>Ethical guidelines for projects dealing with human subjects</td>
<td>Dr E. Talbot, CDC</td>
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End of the first day
Day 2 – Tuesday, 12 February 2002

Objective: To develop country specific proposals for phased implementation of collaborative TB & HIV/AIDS programme activities.

08.00 - 08.15 Summary report of previous day’s proceedings.
   Rapporteurs

08.15 - 08.30 Discussion of day’s objectives
   • To break into country teams
   • Share info among partners
   • Identify joint activities
   Chairperson

08.30-10.30 Session 4: Objective: To describe the interventions
   All groups to participate

08.30 – 08.45 What is necessary to control TB/HIV?
   Dr K De Cock, CDC

08.45 – 09.30 Mathematical modelling of the impact of various interventions on TB/HIV burden (15 mins presentation, 30 mins discussions)
   Dr B Williams, WHO

09.30-10.00 TB and HIV Programme collaboration: Who does what?
   Dr J van Gorkom, KNCV

10.00 – 10.30 Tea/Coffee break

10.30-15.30 Session 5. Parallel sessions (Group A Country participants supported by USAID/CDC; Malawi, S. Africa and Uganda)
   Group A activities

10.30 – 11.00 Introduction to group work and requirements
   USAID/CDC

11.00-11.30 Presentation of template for executive summary of identified activities
   Drs C. Davis, USAID and B. Miller, CDC

11.30-12.30 Country group work (A): Completing the template, reflecting activities so far and determining next steps
   Country Teams (Malawi, South Africa and Uganda)

12.30 – 14.00 Lunch break

14.00 - 14.30 Country group work (A) Completing the template, reflecting activities so far. (contd)

14.30.15.30 Presentation and discussions of identified packages of TB/HIV/AIDS joint interventions for collaborative implementation Country teams of Malawi, South Africa and Uganda
10.30-15.30 Session 5. Parallel sessions: Introduction to proposal writing (Group B
Country participants supported by WHO: Ethiopia, Kenya, Mozambique and Tanzania
Group B activities

10.30-11.00 Country background, problem statement, objectives & expected outcomes
Dr C. Gilks, WHO

14.45 - 15.05 Methods appropriate to answer operational research questions
Dr A Mwinga CDC

15.05 - 15.25 Monitoring and evaluation
W. Nkhoma, WHO

15.25 – 15.45 Tea/Coffee break

15.45 - 16.05 (Optional for Gp A) Data collection, handling, analysis interpretation and reporting
Dr J. Levin, SAMRC

16.05-16.25 (Optional for Gp A) Assessing cost and cost effectiveness of interventions
Dr L Kumaranayake, LSHTM

16.25-17.25 Session 6: Partner perspectives

16.25 - 1.25 Partner perspectives on support for TB/HIV initiatives
USAID, CDC, KNCV, NORAD & DFID representatives

17.25-17.40 Coordinating activities as part of the Global TB/HIV Working Group.
Dr P Nunn, WHO

17.40-18.00 Summary and wrap up of day 2

End of the second day
Day 3 – Wednesday, 13 February 2002

Objective: To develop country specific proposals for phased implementation of collaborative TB & HIV/AIDS programme activities

08.00 - 08.15  Report back on proceedings of the last two days  
Chair/Rapporteurs
08.45 – 09.00  Introduction to group work  
Dr F. Scano, WHO

09.00-17.00 Session 7: Objective: To define the problem, and determine objectives, expected outcomes and package of interventions

09.00 - 10.00  Group work on defining the problems objectives and expected outcomes  
Country Teams

10.00 - 10.30  Tea/Coffee break

10.30 – 11.30  Country presentations on defining the problems, objectives and expected outcomes  
[15 mins each country including discussion]  
Chairperson

11.30 - 12.30  Group work on developing a package of interventions.  
Country Teams and Facilitators

12.30 - 14.00  Lunch break

14.00 - 15.00  Group work on TB and HIV programme collaboration: who does what?  
Country Teams

15.00 - 15.30  Tea/Coffee break

15.30 - 16.30  Country presentations on TB and HIV programme collaboration: who does what?  
[15 minutes each country including discussion]  
Country Teams

16.30 - 17.00  Wrap up of days proceedings  
Chairperson

End of the third day
Day 4 – Thursday, 14 February 2002

Objective: To develop country specific proposals for monitoring and evaluation of collaborative TB & HIV/AIDS programme activities

08.30 – 09.00 Recap of proceedings of previous day
Chairperson

09.00-17.00 Session 8: Objective: To develop methods for monitoring and evaluation of TB and HIV programme activities.

09.00 - 10.00 Group work on monitoring and evaluation
Country Teams

10.00 - 10.30 Tea/Coffee break

10.30 - 12.30 Group work on monitoring and evaluation continues
Country Teams

12.30 - 14.00 Lunch break

14.00 - 15.00 Presentations of group work on monitoring and evaluation
Country Teams

15.00 - 15.30 Tea/Coffee break

15.30 - 16.45 Group work to finalize the plans for monitoring and evaluation
Country Teams

16.45 - 17.00 Summary of days proceedings
Chairperson

End of the fourth day
Day 5 – Friday, 15 February 2002

Objective: To finalise the first full draft proposals for phased implementation of collaborative TB /HIV/AIDS programme activities.

08.30 - 08.45 Recap of previous day’s work
*Rapporteurs*

08.45 – 9.15 Presentation on developing proposal workplan and budget
*Dr P Godfrey-Faussett LSHTM*

09.15- 10.00 Group work to develop workplan for project implementation
*Country Teams*

10.00 - 10.30 Tea/Coffee break

10.30-11.30 Group work to finalise proposals
*Country teams*

12.30 - 14.00 Lunch break

14.00 - 15.00 Group work to finalise proposals contd
*Country Teams*

15.00 - 15.30 Tea/Coffee break

15.30 - 17.30 Country Groups: Draft proposal presentations *(15 mins presentation + 15 mins discussions)*
*Country Representatives*

17.30 - 18.00 Outline of next steps towards finalization of proposals and provision of resources
*WHO Secretariat (Drs P. Onyebujoh, W. Nkhoma and F. Scano)*

****Closing of the Workshop****
Communicable Diseases Cluster
Tuberculosis Strategy and Operations (TBS)
Stop TB Department in Collaboration
with Regional Office for Africa (TUB/RPA)

Workshop to Develop Collaborative TB and HIV/AIDS
Programme Activities
Nairobi, Kenya 11-15 February 2002
At The Stanley Hotel

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Workshop to Develop Collaborative TB and HIV/AIDS Programme Activities
Nairobi, Kenya 11-15 February 2002

Presentations and technical reviews
Workshop to develop collaborative TB and HIV/AIDS activities
Nairobi
February 11-15, 2002

Co-ordination of Activities

Dr Paul Nunn
STOP TB Geneva

Contents

- Global TB/HIV Working Group
- Global Fund to Fight AIDS, Tuberculosis and Malaria

Goals of TB/HIV Working Group

- To reduce the burden of TB in high HIV prevalence populations
  - To bring together stakeholders active in TB/HIV to harness and co-ordinate efforts
  - To foster good collaboration of TB and HIV communities
  - To facilitate, stimulate, encourage and co-ordinate creation of mechanisms for reduction in burden in countries
  - To ensure international policy development firmly grounded in countries’ experience
Results of First meeting, April 9-11, 2001

- Endorsed Strategic Framework
- Recommended partners to:
  - develop district based joint activities and show feasibility of phased joint TB/HIV activities
  - enhance collaboration at global and national levels
  - expand ProTEST
  - broker funds
  - prepare guidelines
  - develop evaluation framework

Results of First meeting, continued

- Identify and disseminate further examples of TB/HIV activities
- UN general assembly and WHA resolutions
- Seek increased resources for TB/HIV activities
- Promote research, define agenda, especially on HAART

Progress

- Strategic Framework
- Scientific panel
- Guidelines for phased implementation of TB and HIV activities
- Analysis of recurrent TB among HIV infected patients
- Style for documents
- Core group established January 2002
- First PIA-TB/HIV workshop, Nairobi
  - 2nd meeting planned June 14-16, Durban, S Africa, with IUATLD

2nd Meeting TB/HIV Working Group will probably address.....

- Analysis of interaction of TB and HIV activities, global to district
- Review of expansion of TB/HIV collaborative activities, implementation of guidelines
- Development of research agenda
- Consideration of WG joint planning
- Define objectives and ways of working

Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM)

- Health is essential for social and economic development (Commission for Macroeconomics and Health)
- G8 (and others) pledged “massive and sustained increase in resources” to fight diseases of poverty
- Financial instrument, not a programme
- Emphasis public-private partnership, results, independent review, efficiency
- Transitional working group (TWG)
- Supported by WHO
- First board meeting Jan 28-29, 2001
GFATM

- Grants will aim to
  - address the 3 diseases and contribute to strengthening health systems
  - stimulate country level partnerships
  - purchase commodities, and strengthen procurement
  - address social and gender inequalities
  - support operational research

- Grants will require
  - national multi-year strategic plans
  - PRSP
  - recent situation analysis, programme review
  - evidence of complementarity of funding
  - key results indicators
  - plans for independent financial and programme audits

Call for Proposals

- First round deadline: March 10, 2001 and decision April 23-24
- Three rounds per year
- $700 million to be disbursed
- Priority to greatest need = high burden/resources ratios
- Country co-ordination mechanism
- Governments through CCMs, cross-border groups, (NGOs)
- Independent Technical Review Panel
- www.globalfundatm.org

The Baby and the Bathwater
A strategic framework to decrease the burden of TB/HIV

Dermot Maher
Stop TB Department
World Health Organization
Geneva, Switzerland
February 2002

Outline of presentation

- Why do we need a strategic framework to control TB/HIV?
- TB as part of the HIV/AIDS epidemic
- Justification for joint TB and HIV/AIDS programme activities
- What interventions are available against TB/HIV?
- A coherent health service response to TB/HIV
- Essential package of HIV/AIDS care
- From a strategic framework to national TB/HIV implementation strategies
- What is needed for comprehensive action?

Why do we need a strategic framework to control TB/HIV?

The international response to TB/HIV is evolving:

Previously -
“A dual strategy for a dual epidemic”
TB and HIV/AIDS programmes have largely pursued separate courses, despite overlapping TB/HIV epidemiology.

Now -
Strengthened unified health sector strategy to control TB/HIV as an integral part of the response to HIV/AIDS.

The burden of HIV-related disease

- At any stage
  High-grade pathogens, e.g. pneumococcus, non-typhoid salmonellae, Mycobacterium tuberculosis

- More advanced immunosuppression
  Low-grade pathogens, e.g. candida, Cryptococcus neoformans, toxoplasma, Pneumocystis carinii, atypical mycobacteria

How does HIV fuel the TB epidemic?

1. Promotes progression to active TB in people with Mycobacterium tuberculosis infections
   - recently acquired
   - latent (most powerful known risk factor)

HIV-infected people co-infected with Mycobacterium tuberculosis
Annual risk of developing TB = 6-15%  

2. Increases rate of recurrent TB (endogenous reactivation or exogenous re-infection)

3. Increased TB cases in HIV-infected people pose risk of TB transmission to general community.

Adults and children estimated to be living with HIV/AIDS at end 1999

Total: 33.6 million

UNAIDS
HIV - MTB co-infection, 1999

Dynamics of TB and HIV in Uganda

Dynamics of TB and HIV in Kenya

A key fact
At least 1 in 3 people with HIV will develop TB

Implication for HIV/AIDS Programmes
TB is a huge part of HIV/AIDS care
Implication for TB Programmes

Prevention of HIV is crucial to control TB

Sequence of events in transmission of TB

Inadequate treatment
Active TB
M. tuberculosis infection
Transmission of infection
Recurrence after treatment
Untreated
HIV infection
Transmission of infection
TB progression
TB reactivation
Active TB

Main interventions against M. tuberculosis

TB preventive treatment
Rifampicin containing regimens
Intensified case-finding
Decreased diagnostic & treatment delays
HAART

Sequence of events by which HIV fuels TB

Inadequate treatment
Active TB
M. tuberculosis infection
Transmission of infection
Recurrence after treatment
Untreated
HIV infection
Transmission of infection
TB progression
TB reactivation
Active TB

Main interventions to interrupt the sequence of events by which HIV fuels TB

TB preventive treatment
Rifampicin containing regimens
Intensified case-finding
Decreased diagnostic & treatment delays
HAART

Expanded scope of new strategy to control TB in high HIV prevalence populations

Intensified TB case-finding and treatment
Additional measures beyond TB case-finding and treatment
- TB preventive therapy
- Interventions to decrease morbidity and mortality in HIV-infected TB patients
- Interventions to decrease HIV transmission
- ARV therapy

BCG
TB preventive treatment
STI treatment
Safe IDU
Condoms
STI treatment
Safe IDU

Sequence of events:
HIV-negative
HIV-positive
Intervention against M. tuberculosis
Intervention against HIV
Status of implementation of interventions in sub-Saharan Africa in 2001

Condoms
annual provision = 5 per man per year (17 in top 6 countries)
2 billion per year needed for all countries to match top 6

Shelton JD, Johnston B. Br Med J 2001; 323: 139

NTP performance in 24 countries with adult HIV seroprevalence > 5%

Country | adjusted treatment success (%) | % popn DOTS coverage
--- | --- | ---
Botswana | 49 | 100
Burkina Faso | 69 | 100
Burundi | 75 | 100
Cameroon | 82 | 36
Central African Republic | no data | 0
Congo (Brazza) | no data | 0
Cote d'Ivoire | 62 | 10
(data doubtful since 0% death rate reported)

NTP performance in 24 countries with adult HIV seroprevalence > 5%

Country | adjusted treatment success (%) | % popn DOTS coverage
--- | --- | ---
Dem Rep Congo | 72 | 62
Djibouti | 79 | 100
Ethiopia | 77 | 63
Haiti* | 85 | 42
Kenya | 80 | 100
Lesotho | no data | no data
Malawi* | 88 | 100
Mozambique | no data | no data
Namibia | 62 | 100

NTP performance in 24 countries with adult HIV seroprevalence > 5%

Country | adjusted treatment success (%) | % popn DOTS coverage
--- | --- | ---
Nigeria | 76 | 45
Rwanda | 78 | 100
South Africa | 77 | 66
Swaziland | no data | no data
Togo | no data | no data
Uganda | 67 | 100
Tanzania | 79 | 100
Zambia | no data | no data
Zimbabwe | 77 | 12

TB and highly active antiretroviral therapy (HAART)

- HAART reduces risk of TB
- Lack of health system preparedness to deliver HAART
- Operational research needed to study the feasibility of HAART and the impact on TB in developing countries
- Increased investment in health infrastructure

Antiretrovirals
HIV-infected people treated with HAART = 10,000 (out of 25 million)
A coherent health service response to TB/HIV

A framework for HIV/AIDS care which incorporates interventions to address TB

Interventions relevant at different levels of the health care system

Rational criteria in determining priorities

The essential package of HIV/AIDS care in low-income countries

Essential package of HIV/AIDS care in low-income countries

Home and community care
- Information and education (e.g. basics of HIV transmission)
- Community member support of TB patients, including DOT
- Prevention of transmission of HIV (e.g. condoms, safe breastfeeding)

Primary care
- Targeted information and education on HIV and TB
- VCT for HIV
- STI treatment
- Prevention of common HIV-related diseases, e.g. isoniazid, CTX
- Decreased nosocomial transmission, e.g. TB
- Intensified TB case finding
- Disease surveillance, e.g. TB recording and reporting

Secondary care (additional to interventions in Primary Care)
- Diagnosis and treatment of common HIV-related diseases, e.g. smear-negative pulmonary TB and extrapulmonary TB
- Terminal in-patient care
- Safe blood
- ARVs

Tertiary care (additional to interventions in Secondary Care)
- Management of complications of common HIV-related diseases, e.g. pericardial and meningeal TB, cryptococcal meningitis, toxoplasmosis, Pneumocystis carinii pneumonia

From a strategic framework to national implementation strategies

What is needed to strengthen general health service provision of interventions to control TB/HIV as part of the response to HIV/AIDS?

- Increased funding
- Improved general health service provider capacity to deliver interventions (human resources, infrastructure, and commodities)
- Shift in policy away from specific HIV/AIDS activities towards a strengthened health service provider response to meet the needs of high HIV prevalence populations
- Operational research on TB and HIV programme collaboration in supporting health providers
- Effective coordination of many role players
Guidelines for phased implementation of collaborative TB and HIV programme activities

Fabio Scano
Stop TB Department
World Health Organization
Nairobi, Kenya
February 2002

Outline of presentation

• The problem and the response
• The rationale for the guidelines
• WHO are these guidelines for?
• WHAT TB and HIV/AIDS programmes should implement
• HOW to implement collaborative activities?
• WHO should implement these activities
• Challenges
• Next steps

The problem: prevalence of HIV - MTB co-infection, 1999

The problem (cont)

• Tuberculosis in high HIV prevalence populations is a leading cause of morbidity and mortality among HIV-infected patients
• HIV is driving the TB epidemic in many countries (sub-Saharan Africa)

The response

The international response to TB/HIV is evolving:

Previously -
“A dual strategy for a dual epidemic”
TB and HIV/AIDS programmes have largely pursued separate courses, despite overlapping TB/HIV epidemiology.

Now -
Strengthened unified health sector strategy to control TB/HIV as an integral part of the response to HIV/AIDS.

The response (cont)

Expanded scope of new strategy to control TB in high HIV prevalence populations includes:
• Full implementation of the DOTS strategy
• Additional interventions against TB:
  - Intensified TB case-finding and treatment, TB preventive therapy
  - Interventions to decrease HIV transmission,
    e.g. condoms, STI treatment, safe injecting drug use
  - ARVs.
• Interventions to decrease morbidity and mortality in HIV-infected TB patients
  e.g. cotrimoxazole prophylaxis, OI treatment
The rationale

Most districts see the need for reducing the burden of the overlapping TB and HIV epidemic, but may not be aware of potential collaborative TB and HIV activities and their benefits.

WHO are these guidelines for?

1. District policy-makers and health providers:
   - simple, practical
   - Evidenced-based
   - Adaptable
   - Enable rational planning, priority setting

2. National policy makers and programme managers:
   - Policy consensus and strategy
   - Advocacy
   - Technical assistance

WHAT should TB and HIV/AIDS programme implement?

Collaborative TB and HIV programme activities:
- Building on the TB and HIV interventions in the expanded scope of the new strategy for TB control
- Criteria for TB/HIV interventions

HOW to implement collaborative TB and HIV programme activities

Steps outlined in the guidelines:
1. Situation analysis:
   - Baseline data (as much as possible using existing data)
   - Existing services (checklist: which providers are delivering which element)
2. Co-ordination of stakeholders (co-ordinating body, TB/HIV committee)
3. Development of district work-plan with objectives and budget for each partner
4. Costing activities (affordable; within current budget; new resources)
5. Steps to implement activities (planning flow-charts and activity boxes)
6. Monitoring and evaluation

HOW should programmes implement collaborative TB and HIV activities?

Planning flow-chart:
Each flow-chart is for one service-provider (e.g. District Health provider of TB care, VCT service, PLHA support group, STI service, HBC service, Primary health care centre, district hospital, HIV clinic) at district level, and describes several levels of potential collaborative TB/HIV activities.

Activity boxes:
each activity box describes the steps to implementation of each collaborative TB/HIV activity.

Planning Flow-charts:
District Health provider of TB care
- Core activities
  - DOT Programme
  - Regular drug supply
  - DOT system
  - Case rate
  - Time identified start treatment
- HIV health promotion to TB patients
- TB/HIV IEC materials
- VCT promotion to TB patients
- Condom promotion
- Intensified TB case finding
- VCT clients
- Household contacts

District Health provider of TB care
- Collaborative activities - Level 1
Planning Flow-charts:
District Health provider of TB care (cont)

- CA - Level 3
  (requires essential level of VCT services)
  - Isoniazid preventive therapy
  - Cotrimoxazole preventive therapy

- CA - Level 4
  - ARTs

Activity Box

- One-page outline of the essential criteria for implementation of collaborative TB/HIV interventions, with details of the activities for each partner.

Activity Boxes

1. Promotion of VCT to TB, HBC and STI patients
2. Promotion of safer sexual practices and condoms to TB patients
3. Intensified TB case-finding by NTP partner
4. Cotrimoxazole preventive therapy
5. TB screening at VCT centres
6. STI screening at VCT centres and VCT promotion by STI treatment services
7. STI treatment at VCT centres
8. TB sputum smear microscopy at stand-alone VCT centres
9. TB treatment at stand-alone VCT centres
10. Community involvement in TB treatment
11. PLHA support group involvement in TB (or STI) activities
12. Isoniazid preventive therapy-example of implementation at a stand-alone VCT centre
13. Anti-retroviral treatment (ART)

Monitoring and evaluation

- Data collection
  - as much as possible within routine systems
  - guidelines to suggest indicators for each intervention
- Reporting
  - at district level to the partners
  - to the national level
- Annual review and preparation of next annual work-plan

Challenges

- To prioritise interventions:
  a) learning by doing
  b) modelling studies
- To develop capacity to deliver interventions
- Cost sharing and resource mobilisation
- Effective co-ordination of many role players

Next steps

- More contributions from field workers
- Plans for utilisation of guidelines in the countries
- Process for guidelines finalisation
List of contributors and reviewers

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Other reviewers: Rachel Baggaley, Antony Harries, Steve Graham
Linking TB and HIV Services
The Botswana Experience

T L Moeti
Deputy Director of Health Services
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Botswana

Background
- Botswana has one of the highest HIV prevalence and TB incidence rates globally
- 2000 – TB notification rate 584 cases per 100,000
- 2000 HIV sentinel surveillance – 38.5% of antenatal population HIV positive, about 35.5% of 15 – 49 age group HIV positive
- Two epidemics closely linked - MoH/CDC (BOTUSA) studies - about 75% of TB patients HIV positive
- TB leading cause of AIDS deaths (36%)
- TB notification rate increasing by 10 – 15% annually

Botswana TB Notification Rate /100,000 1975 - 2000

Moving to Better TB/HIV Service Integration
- Recognition – two epidemics closely linked
- TB/HIV services dealing with the same group of patients
- Prog. both within – PHC Dept, separate divisions, - few formal linkages, little joint planning prior to 1996/7
- 1998 UNAIDS/MoH review of TB/HIV service integration - showed few TB pts getting HIV counselling, or referral for HIV services
- Low rate of HIV testing among TB patients in general clinical services
- Loss of opportunities to address issues which could improve TB/HIV prevention and control
- Growing impetus for better TB/HIV service integration internationally
- 1999 TB Programme Review

National Median HIV Prevalence Estimates
From Sentinel Surveillance Studies

Moving to Better TB/HIV Service Integration
- 1996 to date: Collaborative MoH/CDC TB/HIV research programme (BOTUSA) - local epidemiological data on two epidemics - strengthened basis for bringing two services closer together
- Provided data on TB/HIV co-infection rate
- HIV risk factors among TB patients
- Confirmed TB as leading cause of mortality among AIDS patients
- 1998-99 Francistown TB HBC study – econ. analysis
- 1996 – TB Prog. contributes to development of HBC strategy
- 1997-9 – incorporation of some TB elements into MTP II
- 1998 – UNAIDS/MoH assessment of TB/HIV services
- 1999 TB Programme review – identified many issues; currently being addressed in TB – HIV operational plans

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Addressing TB/HIV Service Integration

1997-98 development of MTP II, AIDS Operational Plan
Joint planning opportunity – incorporation of TB issues into national AIDS plans, discussion opportunity
TB programme participation in review of national HIV services – membership of reference group
- Training on clinical management of TB/HIV
- Integrated TB/HIV services - provision of care in community, hospital, access to HIV/counselling and support
- Integration of TB/HIV issues into training curriculum for HIV counsellors
- TB preventive therapy for persons living with HIV/AIDS
- Prevention of TB transmission in health care settings
- Development of TB/HIV health education materials
- HIV surveillance among TB patients
- TB transmission in institutions such as prisons

Key Opportunities
- Development of chain of VCTs
  - to improve knowledge of HIV status, improve access to HIV services, Est. Apr 2000
  - Major TB/HIV service link opportunity
  - accessing patients through VCTs
  - opportunity to address TB issues and provide TB services beyond formal health sector
- PMTCT – 1999
- IPT Aug 2000 – piloting to assess operational feasibility
- Development of MTP II - Revamping AIDS Prog.

Current TB and HIV Service Linkages
- Voluntary Counselling and Testing Centres
- Isoniazid Preventive Therapy
- PMTCT ............
- Home Based/Community Care Services
- HIV Counsellor training ...........
- CHW (FWE) training .....TB and HIV
- TB/HIV clinical management
- Proposed ARV services
- Appreciation at highest policy level of close link between TB and HIV epidemics

Voluntary Counselling and Testing (VCT) As an Entry Point to HIV and TB Care

- Facilitate Sexual Behaviour change
- Psychosocial support accepting and coping with HIV status
- Referral to PMTCT
- HAART
- Referral to social and peer support
- Condom promotion
- TB/HIV IEC
- Access to IPT
- Early management of opportunistic infections TB, STIs

VCT
- Establishment of VCT prioritised by MoH to
  - improve knowledge of HIV status, promote behaviour change
  - improve access to HIV services
  - Provide rapid testing and counselling, other support
- Development and running of VCTs through CDC/BOTUSA support under GAP
- Started April 2000 - Roll-out underway.
- 9 out of planned 15 operational
- Important opportunity for linking TB/HIV services, improving TB knowledge and awareness
- 20000 clients seen (cumulative – about 50% in Gaborone)
- Now about 1600 per month
- Seropositivity rate approx 25% (M 21.1%, F 26.9%)

Demand for VCT at Tebelopele Centres (April 2000 – Sept. 2001)

Source: Tebelopele VCT Centres
**VCT TB Programme Links**
- Working with TB programme since IPT services launched
- Provide general TB information and education and on IPT, at VCTs, radio programmes etc
- Major source of client referral for IPT services – screening, access to treatment at clinics
- All HIV positive clients informed about IPT particularly at post-test counselling
- Gaborone and Francistown – 65% of HIV +ve clients referred for IPT
- VCTs not yet used as site for IPT service implementation – clinic availability
- Screening for TB and IPT – health facility based

**Prevention of Mother to Child Transmission of HIV**
- PMTCT programme launched in April 1999 in Francistown and Gaborone as pilot project.
- Assessed operational feasibility and acceptability of PMTCT implementation
  - experience informed process of expansion to nationwide coverage
- Lessons learned will be applied to roll-out of other services e.g IPT, ARV.
  - 21% of IPT clients enrolled in pilot from PMTCT, but enrollment from PMTCT low
  - PMTCT counsellors trained in IPT - introduced for districts implementing IPT

**Full Integration of TB services into PMTCT HIV care package**
- The PMTCT programme intends to provide to women, their children and partners a comprehensive HIV care programme:
  - Antiretroviral drugs – mother, baby, partner
  - TB prevention
  - Cotrimoxazole for PCP prevention
  - Supportive counseling
  - Nutritional support
- More formalised integration of IPT into PMTCT:
  - Plans being drawn up for the training of PMTCT TOTs in IPT
  - Formal integration of IPT into the PMTCT training curriculum.
  - Every woman enrolled in the PMTCT will be evaluated for IPT at the postnatal visit.
  - IPT data will be incorporated into revised MCH/FP data collection tools.

**Linking IPT, VCT and PMTCT services**
- IPT pilot started Aug 2000, Three sites Gaborone, Francistown, South East District
- From inception of IPT services link with VCT and PMTCT viewed as crucial to success
  - IPT working group includes BOTUSA, PMTCT, ASU, TB Prog, DHT personnel, clinicians
  - Piloting in sites where VCT and PMTCT services existed.
  - PMTCT counselling training includes IPT component
  - IPT provided new opportunity for TB IEC from VCTs
  - IPT as part of a package of HIV/TB services but coordinated from TB programme, strong support from BOTUSA Project

**Source of referrals for IPT**

<table>
<thead>
<tr>
<th>Patient Category</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>VCT</td>
<td>60</td>
</tr>
<tr>
<td>PMTCT</td>
<td>22</td>
</tr>
<tr>
<td>ILL</td>
<td>16</td>
</tr>
<tr>
<td>Other</td>
<td>2</td>
</tr>
</tbody>
</table>

**Linking IPT, VCT and PMTCT services**
- IPT pilot – assessed feasibility of IPT implementation
- Identified issues in linking IPT and other TB services with other HIV services:  VCT, PMTCT, general district health services
  - 229/935 (24.5%) exclusions – of these 72% suspected TB
  - Roll out plan under development – sequence will be linked to roll out of PMTCT and VCT services –
  - Roll out phase to be jointly funded by GoB and CDC through GAP as part of HIV support.
Home Based/Community care Services

- Provision of comprehensive quality CHBC services for HIV/AIDS/STI and TB patients
- Evidence for cost effectiveness of DOTS implementation in HBC setting from MoH/CDC study in Francistown
- Many HBC HIV +ve patients also have TB. TB issues important part of HBC/community care services:
  - TB programme involved in production of first HBC guidelines 1996
  - TB issues incorporated into HBC training modules for TOTs and CHWs (2000)
  - TB integral part of 2002/3 operational plan: includes training plan for integration of DOTS issues into CHBC training and service guidelines, TB prevention and IPT issues, TB IEC, HBC support for pt monitoring
- Effective working relationship between TB and HBC programmes

HIV Counselling

- Importance of TB component in counsellor training appreciated
- Incorporation of TB into counselling manual and training
- IPT included in counsellor training programmes since pilot established
- Participation of counselling/ AIDS IEC personnel in IPT activities
- Need to streamline training so that it includes PMTCT, TB, IPT and now ARV issues to produce versatile counsellors

Proposed ARV Programme

- In initial phase TB patients identified as one of four patient groups to be addressed which are:
  - Pregnant women and their partners
  - Paediatric inpatients
  - TB patients
  - Adult inpatients

Achievements

- Significant progress on establishing linkages with
  - VCTs, PMTCT services, Counselling services, Community/HBC
  - TB incorporation into HIV clinical guidelines and training
  - Generation of good local epidemiological data to provide evidence for linkages between two epidemics
  - Strengthening TB and HIV lab services
  - Strong programme involvement in development of research agenda – facilitated navigation of issues through policy process
  - Close working relationship between TB Programme and BOTUSA Project central to strengthening of link with VCT services
  - IPT services will be funded from HIV service budget (even though coordinated by TB programme)
  - Increasing coverage of TB issues in HIV related IEC through various media

Challenges

- Addressing structural challenges to formalising TB/HIV programme linkages
- Improving collaborative planning of TB/HIV services between TB Prog, ASU, Reproductive Health Services and district service support
- Synchronising developments in TB services, HIV services, VCTs, PMTCT, HBC etc
- Strengthening counselling component in TB/HIV services
- Matching the pace of programme expansion with human resource capacity
- Low population density spread over large geographical area.

Opportunities

- Introduction of IPT, VCT, PMTCT and proposed ARV services has reinforced importance of establishing strong linkages
  - Provided TB programme opportunity to establish links hitherto unavailable
- Restructuring of AIDS/STD services – likely to bring TB/HIV services closer together, including TB/HIV surveillance issues
- Restructuring of MoH – may help address some of the structural issues
- Way Forward – build on previous experience, strengthen research result dissemination, use restructuring process positively, match programme expansion to HR base
Acknowledgements

- PMTCT Programme, Family Health Division
- BOTUSA Project
- TB Programme, Epidemiology Unit
- IPT Coordination Staff
- Tebelo VCT Centres
- WHO Country Office
- AIDS/STD Unit
TB and HIV Programme Collaboration: Who does what?

Jeroen van Gorkom
KNCV

Who does what?

Determinants

- political commitment
- health policy
- competence
- capability/capacity
- funding

HIV/AIDS and TB control interventions

HIV/AIDS
- HIV prevention through behavioural change (Abstinence, B., Condom, safe iv-du)
- Safe blood product supply
- VCT
- Treatment of OI’s
- Home based care
- Psychological-social care
- ARVT

TB
- early case-finding
- adequate treatment
  And:
  - preventive treatment
  - enhanced passive CF
  - screening
  - community-based DOT

The interface of HIV/TB: The dually infected person

1. The healthy worried
2. The TB patient
3. The patient with HIV/AIDS related disease
4. The community

The “healthy worried”

Where: VCT centres
IEC message:
- stay negative if HIV- 
- live positive if HIV+
Clinical care and screening:
- TB >> treatment or preventive treatment
- STI
- other OI’s (herpes zoster, ..)
Referral to specialised services:
- HIV/AIDS, PMTCT, ARVT
- TB: tuberculosis treatment, IPT
- mental health
Responsibility:
1. HIV/AIDS programme for VCT services, quality assurance through licensing, monitoring and inspection, training etc.
2. TB programme for training of VCT staff on TB, monitoring, referral
3. Both for good communication, referral, monitoring, evaluation.

The patient with TB

Do I have HIV/AIDS?

Where: clinics and hospital wards
IEC message:
- Comprehensive clinical care, especially other OI’s and STI’s
- Good patient IEC on HIV/TB
- Promotion and referral for VCT
- Referral for Health Service DOT, or Community-based DOT
- Referral to home-based care programme for HBC-DOT
- Referral for prevention of MTCT
- Referral for ARVT
Responsibility:
1. TB programme for comprehensive medical care while on TB treatment
2. HIV/AIDS programme for post-TB treatment HIV/AIDS care
3. Both for communication, referral, monitoring, evaluation.
The patient with HIV/AIDS related disease

Where: clinics and medical wards
• screening for TB
• diagnosis and treatment for TB
• VCT
• Treatment of other OI's
• Referral for PMTCT
• Referral for health system DOT/home-based-care DOT
• ARVT according to National ARVT policy

Responsibility:
1. HIV/AIDS programme for technical policy and AIDS care package
2. TB programme for technical policy
3. Both for communication, monitoring, evaluation.

The community

• Address negative perceptions
  – TB = AIDS
  – Slimming = HIV/AIDS
• Community IEC
  – TB = AIDS. TB can be cured!!!
  – Slimming = AIDS. => hospital/clinic, find TB and other curable disease
  – Target traditional healers
  – Target community leaders and other intermediaries
• Advocacy
  – Target politicians, policy makers, other sectors

Responsibility:
HIV/AIDS and TB control programme for consistent HIV/TB messages

Conclusion

• HIV/AIDS prevention and care policy is responsibility of NACP (package of care), including TB care
• TB control policy and implementation is responsibility of NTP
• Implementation of HIV/AIDS and TB prevention and care is joint responsibility where there is an interface/overlap
• HIV/AIDS care is part and parcel of TB treatment for duration of Rx
• Main interventions TB: early CF and good treatment
• Main interventions HIV: HIV prevention, VCT, P-MTCT, ARVT
• HIV/TB dual epidemic best controlled in close collaboration
• Integration only when more efficient and without compromising minimum standards of performance: DOTS targets!
Implementing TB Screening and Preventive Therapy at a Voluntary Counselling and Testing Centre:

Operational lessons from Uganda

AIDS INFORMATION CENTRE
NATIONAL TB AND LEPROSY PROGRAMME
AIDS CONTROL PROGRAMME/MOH
CDC-UGANDA

The AIDS Information Centre

- AIC started in 1990 and now offers VCT integrated services: HIV and syphilis testing, STD clinical services, Post Test Club, Family Planning
- Over 500,000 voluntary counseling and testing (VCT) sessions conducted
- In Jan 2001, AIC, NTLP, ACP & CDC initiated pilot TB Program at AIC-Kampala
- AIC now has 4 main branches and 47 indirect sites in 22 districts in collaboration with MOH

AIC TB program

- HIV-positive adults screened for signs and symptoms of active TB by questionnaire and physical examination
- Clients with symptoms or signs of TB further evaluated by chest x-ray and sputum microscopy
- Clients diagnosed with active TB referred to treatment centers
- PPD-positive clients without active TB offered 9 month isoniazid preventive therapy (IPT)

Presentation Outline

- Background
- Overview of AIC TB Programme
- Operational lessons learned
  - Loss of people in screening process
  - Screening for Active TB
  - Referral and treatment of Active TB cases
  - Use of PPD
  - Follow-up for preventive therapy
- Next Steps
- Summary

Client pathway

- VCT Clients
- HIV positive clients
- Screening Questionnaire
- Physical exam
- Chest radiograph/Sputum Microscopy/Tuberculin skin test
- Active TB (HIV+ or HIV-)
- INH Preventive Therapy
**Characteristics of Persons Screened**

*N=3,262*

- Mean age 33 years
- 66% women
- 77% unemployed
- Men were more likely to have TB than women (13% vs. 8%, p=0.003)
- Persons with Standard 7 or lower education were more likely to have TB (62% vs. 42%, p=0.001)

**Lesson 1: Loss of people in TB screening and IPT assessment**

*N=3,262*

- 859 (26%) lost during TB screening:
  - Never reached Medical booth
  - Did not return for PPD reading
  - Did not return after antibiotics
- 1132 (35%) lost in IPT assessment:
  - 24% ineligible for IPT
  - 11% declined IPT
- Only 1305 (39%) completed full assessment process

**Outcomes of those fully assessed**

*N=1305*

- Other 4%
- Active TB 13%
- PPD negative 56%
- IPT 37%

**Clients with direct benefit**

*N=1305*

- Active TB 169 13%
- Pulmonary TB 162
- Extra pulmonary TB 7
- Enrolled on isoniazid preventive therapy 354 27%
- Other Pulmonary Processes 511 39%

>79% who completed assessment had direct benefit

**Lesson 2: Active TB Screening Algorithms**
Screening for Active TB

- Need to screen everyone for active TB; not just those eligible for IPT
- Screening can be costly
- Need to identify most sensitive and cost-effective screening algorithm for scaling up of the program
- Assessment of screening criteria from routinely collected data from clients between Jan-Oct. 2001

Operational Implications

<table>
<thead>
<tr>
<th>Algorithm</th>
<th>Active TB diagnosed* (no gold standard)</th>
<th>Active cases missed (IPT)</th>
<th>Pulmonary process</th>
<th>Avoidable CXR or sputum exam</th>
<th>Avoidable physical exam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Any symptom</td>
<td>100%</td>
<td>0</td>
<td>100%</td>
<td>51</td>
<td>774</td>
</tr>
<tr>
<td>Cough 3 wk</td>
<td>84%</td>
<td>21 (12)</td>
<td>51%</td>
<td>31</td>
<td>114</td>
</tr>
<tr>
<td>Cough 2 wk or Lym nodes</td>
<td>98%</td>
<td>3 (1)</td>
<td>73%</td>
<td>34</td>
<td>774</td>
</tr>
<tr>
<td>Fever 1 wk</td>
<td>95%</td>
<td>6 (5)</td>
<td>79%</td>
<td>41</td>
<td>146</td>
</tr>
</tbody>
</table>

Lesson 3: Strengthening Referrals for TB Treatment

Diagnosis of Active TB

- 169/3264 (5%) of all HIV+ AIC clients had active TB
  - Of those fully assessed, 13% had active TB
- Of these, 50% were smear positive; 45% smear negative and 5% had extra-pulmonary
- All active TB patients were referred to treatment centres

Follow-up for Active TB cases

- Rapid assessment in July of referred patients showed:
  - over 50% never reached TB treatment centres
  - over 30% of those who began treatment had already defaulted
- Establishing IPT in stand alone VCT centres with referral for TB treatment is challenging
  - Dilemma about whether to establish DOTS programme for AIC clients or strengthen referral process

Strengthening Referral process for Active TB cases

- Provide transport and volunteers to escort active TB patients to referral units
- Created file and tracking system for all suspicious cases; keep referral information in client AIC record
- Established special relationship with treatment centres
- Repeat assessment of referral process in 3 months
Lesson 4: Use of PPD

- AIC staff trained in how to place and read PPDs; cut-off of >5mm
- Total of 1836 PPDs placed
  - 408 (22%) never returned for PPD reading
- Of 1428 who returned:
  - 37% were PPD positive

PPD Lessons learned:

- Easy to use
- Saves substantial costs
- May serve as a screening mechanism for likely defaulters
- Requires refrigeration; may not be suitable for many rural areas

Lesson 5: Follow-up for Patients on IPT

- Preliminary Analysis
- 95 clients enrolled between Jan-April 2001
- Follow-up rates for 7 months of IPT:
  - 1 month: 88 (91%)
  - 3 months: 79 (83%)
  - 5 months: 73 (77%)
  - 7 months: 57 (60%)
- Full evaluation planned; need to educate clinicians about IPT

Next Steps for AIC/NTLP/ACP/CDC TB Programme

- Plan to expand AIC TB Program to 3 other main stand alone AIC branches in 3 more districts; add cotrimoxazole if effective
- For smaller AIC/MOH branches, plan to use most sensitive TB screening criteria and refer to District Hospitals; no IPT for now
- Continue to strengthen DOTS programme throughout the country prior to expanded IPT
**Summary**

- Many clients lost from stand alone VCT centre
- High prevalence of active TB: strong referral system is needed for treatment
- Screening for cough > 2 weeks or fever > 1 week important for VCT sites with lay counsellors to make referrals
- PPDs work well in VCT sites with requisite resources
- Expansion of IPT after strengthening DOTs

**Acknowledgements**

AIC-Uganda Staff:
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- Berna Mugisha
- Jotham Mubungizi
- Rose Habineza
- Fred Semakula
- AIC Kisenyi Counsellors
- PTC Volunteers
- AIC Clients

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- Dr. Rosemary Odeke
  - Buluba Training Centre
- AIDS Control Programme/MOH
  - Dr. Elizabeth Madraa
- CDC-Uganda:
  - Dr. Rebecca Bunnell
  - Dr. Willy Were
  - Dr. Jonathan Mermin
  - Rose Nakityo
The ProTEST Projects: Progress, constraints and next steps

Proposal development Workshop to Develop Collaborative TB and HIV/AIDS Programme Activities, Nairobi 11-15 February 2002

Philip Onyebujoh
Stop TB, Communicable Diseases
World Health Organization

This presentation will cover......

- Goals and objectives of the ProTEST Initiative
- Illustrate VCT as an entrypoint to a range of interventions
- Progress so far
- Constraints identified
- Next steps

ProTEST ProTEST Initiative Goals: Initiative Goals:

1. Reduce HIV transmission
   Good quality VCT

2. Reduce TB transmission
   Improved TB case finding

3. Reduce TB reactivation in HIV+
   Preventive therapy for TB

ProTEST ProTEST Goals…….Goals…….

4. Facilitate collaboration TB and HIV public and private stakeholders at district level

5. Improve comprehensive HIV/AIDS/STI/TB care & referral to ensure continuum of care

Progress so far (1)

- ↑VCT uptake documented in all sites (mid-year 2001)
  - 21,446 (7,287 HIV+) approx 8% of adult pop in pilot district (SA)
  - 18,604 (3,166 HIV +) approx 8% of adult pop in pilot district (Malawi)
  - 5,457 (1,527 HIV +) approx 3% adult pilot pop district (Zambia-1 site)

- ↑VCT uptake linked to rapid tests and decrease in stigma for HIV/TB
Progress... Improved Collaboration within Districts

- Formation of district TB/HIV/AIDS/STI committees leading to:
  - strengthening of both TB and HIV/AIDS services (All sites)
  - ↑ training of HCWs (109 for VCT in SA 2000)
  - ↑ mobilisation of resources → Improved services (↑ sputum turnaround)
  - improved quality of counselling services (All sites)

Progress and Process Indicators (2)

- Improved access to a range of interventions and support:
  - Preventive therapy (IPT, CPT recipients ↑)
  - STI services → syndromic management
  - Quality-assured VCT → access to a package of interventions

Progress and Process Indicators (3)

- Development of a framework for evaluation of ProTEST through:
  - cost/ cost-effectiveness of ProTEST Projects
  - Impact of behaviour change on HIV infection prevented & TB cases averted
  - Guidelines for TB & HIV programme collaboration developed

Progress ......(4)

- Scaling-up
  - Expansion to other districts and provinces (SA)
  - Expansion & new interventions (PMTCT in ZA)
  - Incorporation of some key lessons in country development plans (Malawi).

Constraints identified

- Intensified case finding for TB not fully optimised:
  - To early to evaluate
  - referral systems not fully operational
  - Inadequate NTP performance
  - Lack of HCWs active at all service levels (VCT, STI, TB)
  - Inadequate reporting and recording of data
  - Resource constraints

Constraints......

- Poor adherence to Preventive therapy
  - IPT>CPT
  - range of adherence at 6m (IPT): 17%-63%
  - Poor adherence linked to hunger and stigma
  - resource constraints leading to inadequate monitoring of compliance
**Constraints**

- Scaling up of lessons learned impeded:
  - GRIP approach not fully developed
  - Prioritization of Interventions and key lessons to enable policy formation
  - Resource constraints and competing funding policy by donors
  - Insufficient buy-in by policy makers

**World Health Organization**

**Next steps**

Translating lessons learned into policy and practice through:
- Proper documentation of lessons learned for implementation
- Ensuring buy-in by policy makers
- Develop plans for expansion (ongoing projects for pilot countries)
- PIA workshops and implementation (new countries)

**World Health Organization**

**Summary and conclusions**

ProTEST Pilot projects have:
- Identified package of interventions to be implemented
- Paved the way for PIA (TB/HIV)
- Training and use of HCW at multiple levels
- Strong district collaboration is critical
- Catalysed multi-service provision and access
- Underlined the challenge of PT adherence
- Potential effect of additional interventions

**World Health Organization**

**Constraints**

- Training and referrals
  - Inadequate staff compliment at VCT & linked service interface
  - HCWs need to be multi-skilled
  - Poor logistics and referral networks
  - Voluntary workers not adequately utilised

**World Health Organization**

**Next steps**

Improving technical content through:
- Improvement in ICF and IPT adherence
- Introduction of HAART & PMTCT in package of interventions
- Evaluation of impact through indicators developed (ongoing)
Mathematical models and TB-HIV epidemiology

Why bother?

Questions
If 500 people receive VCT and IPT how many cases of TB and how many cases of HIV do we avert?
Is active finding more effective than IPT?
Since we are still resource-limited: what is the best way to use what we have?
If adherence to IPT is 50% how important is this?
If HIV is driving the TB epidemic should we put our resources into HIV first and worry about TB later?
What about transmission effects?

Karlin, S.
The purpose of models is not to fit the data but to sharpen the questions

Collaboration between WHO and the Maths Dept., University of Southampton
Dermot Maher and Paul Nunn asked the questions
Chris Dye and Brian Williams made a TB model
Christine Currie added HIV to the model and found some answers
Russell Cheng checked our maths.
**Interventions**

- **TB Treatment**
  - Cure rate
  - Detection rate
- **TB Preventive Therapy**
- **Antiretroviral Therapy (ART)**
- **Reduction in HIV Incidence**

- Improving TB treatment is most effective in reducing TB in the short to medium term.
- Reducing HIV incidence is effective in the long term and where the HIV prevalence is high.
- Improving HAART coverage and reducing HIV incidence reduces both the TB and HIV epidemics.
- Preventive therapy is a good medium term strategy.
- HIV prevention is a good long term strategy.
Just the beginning...

Cost-effectiveness

Need to apply these models to real field situations in the particular circumstances of particular settings and countries.

We have not succeeded in answering all your problems. The answers we have found only serve to raise a whole set of new questions. In some ways we feel that we are as confused as ever but we believe that we are confused on a higher level and about more important things.
Developing the workplan and budget

Peter Godfrey-Faussett
London School of Hygiene and Tropical Medicine
Workshop to develop Collaborative TB and HIV/AIDS programme activities, Nairobi 15 Feb 2002

The Logical Framework - a tool to organise thinking
• Relates investments and activities to expected results
• Makes the logical links explicit
• Hierarchy of project expectations - faith, hope and charity

The Logical Framework

<table>
<thead>
<tr>
<th>Narrative summary</th>
<th>Measured indicators</th>
<th>Means of verification</th>
<th>Important assumptions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Supergoal – dream</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Goal – hope</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Purpose – believe</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Outputs – expect</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Activities - contract</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Workplan
• Activities from Log frame
• Component activities
• Who?
• What?
• When?
• Indicators - check that they will all be measured and reported
• Assumptions - can they be checked, updated and reported?

Typical headings

<table>
<thead>
<tr>
<th>Activity (from Log frame)</th>
<th>Components</th>
<th>Responsibilities</th>
<th>Time scale</th>
<th>Issues</th>
<th>Proc. remittices</th>
</tr>
</thead>
</table>

Budget
• Capital
• Human resources
• Training
• Consumables
• Travel and subsistence
• Technical assistance
• Administration
• Evaluation
• Audit
<table>
<thead>
<tr>
<th>Sources of budget</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Government</td>
</tr>
<tr>
<td>• Cost-recovery</td>
</tr>
<tr>
<td>• Grants</td>
</tr>
<tr>
<td>– local</td>
</tr>
<tr>
<td>– national</td>
</tr>
<tr>
<td>– bilateral</td>
</tr>
<tr>
<td>– multilateral</td>
</tr>
<tr>
<td>• Loans</td>
</tr>
</tbody>
</table>
Overview of USAID’s Strategy Direction Regarding TB and HIV

Dr. Connie Davis
Infectious Diseases Advisor
USAID/AFR/SD

USAID Worldwide

- Highly Decentralized
  - Decision making at Mission Level
  - Within Mission, Authorities Delegated Down
- Strong Field Presence
  - USAID’s Comparative Advantage
  - Field Missions program their own funds

USAID Organizational Structure

Global Health: A Priority for USAID

Global Health FY 2001 Funding

All Accounts (in millions)

Infectious Disease Funding

Increasing Levels of TB Funds FY98- FY01

$1.4 Billion in 67 countries and regional projects
Expanded Response to HIV/AIDS in Africa

Criteria for Rapid Scale-Up & Intensive Focus Countries
- The relative severity of the epidemic
- The magnitude of epidemic
- The impact on economic and social sectors
- Enabling environment
- The risk of a rapid increase in prevalence
- Availability of other sources of funding
- Return on investment
- Security and stability issues
- National Interest

African TB Priority Countries

Criteria for TB Focus Countries
- Greatest burden of TB – high incidence of TB (estimated >300/100,000) and those that significantly contribute to the global burden of TB
- Countries with high HIV/AIDS prevalence
- Countries at risk of escalating epidemics or multi-drug resistance

USAID’s Support to TB/HIV
- Delivery of Respiratory Health Care in High HIV prevalent Populations
  - Adult Lung Health Initiative
  - Develop community component with special focus on HIV
  - Provision of effective respiratory care through syndromic approach (emphasis on TB/HIV)
- STOP TB Global movement
  - Partner Forum
  - Development National partnerships
  - Global TB Drug Facility, operational, March 2001

USAID’s Support to TB/HIV
- Support for TB/HIV collaboration [ProTEST]
  - Establish Global Working Group on TB/HIV
  - Coordination Global Working Group
  - Evaluation of ProTEST (economic analysis and impact)
  - Mathematical modeling of impact of ProTEST
  - Development of guidelines for phased implementation of collaborative TB and HIV program activities
  - Coordination of network ProTEST projects
  - Partial support for TB/HIV Collaboration Workshop, Nairobi, Feb 11-15, 2000
USAID’s Support to TB/HIV

- Community contribution to TB care in high prevalence countries
- Strengthening national and international capacity for TB monitoring and surveillance
- Support to WHO/AFRO to expand community TB services
- Support to WHO/AFRO for phased scaling up community TB services in Kenya, Malawi, and Uganda.
The CDC Global AIDS Program (GAP): Promoting Collaboration Between TB and AIDS Control Programs

Bess Miller, M.D.
Associate Director
TB/HIV Prevention and Care
Global AIDS Program, CDC

Workshop to Develop Collaborative TB and HIV/AIDS Programme Activities
Nairobi, Kenya
February 11-15, 2002

Acknowledgments

• Dr. Eugene McCray
  – Director, Global AIDS Program (GAP), CDC
• Rose Pray
  – Public Health Advisor for TB/HIV (GAP), CDC
• Dr. Kenneth Castro
  – Director, Division of TB Elimination (DTBE), CDC
• Dr. Charles Wells
  – Chief, International Branch, DTBE, CDC
• Dr. Elizabeth Talbot
  – Director, The BOTUSA Project (DTBE)
• Dr. Tracy Agerton
  – Medical Epidemiologist (DTBE)

GAP – Background

• Jul 1999 -- LIFE (Leadership and Investment in Fighting an Epidemic) Initiative announced
• Collaborative U.S. Government effort:
  USAID – Coordinating agency
  Department of Health and Human Services
  Department of Defense
  Department of Labor
  Department of Commerce
• U.S. contribution to the International Partnership against AIDS in Africa (IPAA) and global efforts beyond Africa

GAP Partner Countries 2001

| Angola | Haiti | Senegal |
| Botswana | India * | South Africa * |
| Brazil * | Kenya * | Tanzania * |
| Cambodia * | Malawi | Thailand * |
| Cote d’Ivoire | Mozambique * | Uganda * |
| DR Congo * | Namibia | Vietnam * |
| Ethiopia * | Nigeria * | Zambia |
| Guyana | Rwanda | Zimbabwe * |

* WHO high TB burden countries
GAP Guiding Principles
- Foster country leadership and ownership
- Focus on priority needs of each country
- Activities must complement existing programs
- Coordinate with other donors and organizations

GAP Priority Areas
- Primary HIV prevention
- HIV/AIDS treatment and care
- Care for children affected by AIDS
- Surveillance and infrastructure development

GAP Treatment and Care Strategy
- Tuberculosis prevention and care
- Treatment and prevention of other OIs
- Palliative HIV/AIDS care
- Use of anti-retroviral drugs

GAP TB/HIV Prevention and Care Strategy
- Isoniazid preventive therapy for HIV+ persons, when appropriate
- Community and home-based care
- Collaboration between National TB and AIDS Control programs

GAP TB/HIV Prevention and Care Strategy
- HIV education, counseling and testing for TB patients
- Screening for TB and TB infection in HIV+ persons
- DOTS for active TB in HIV infected persons
GAP Activities to Promote Collaboration Between TB and HIV/AIDS Activities -- Headquarters

- Visited NTP as part of GAP country assessments
- Provided education about TB control and NTP to CDC GAP staff
- Developed TB/HIV monitoring indicators
  (What gets measured gets done.)

GAP-Supported TB/HIV Activities at Country Level

- Botswana
  - Isoniazid preventive therapy for TB (IPT)
    - Pilot IPT program and IPT scale-up
- Cote D’Ivoire
  - HIV counseling, testing and care for TB patients

Gap-Supported TB/HIV Activities at Country Level

- Kenya
  - Strengthening National TB Program
    - HIV counseling and testing for TB patients, IPT, and TB services in slums
- Uganda
  - Screening HIV patients for TB and providing IPT
    - Collaboration with national AIDS Information Center (AIC)

GAP-Supported TB/HIV Activities at Country Level

- Zambia
  - Rebuilding TB laboratory infrastructure
    - Renovating laboratory space, providing equipment, technical consultation and supporting training
    - Plans to support development of a national laboratory quality assurance program

External Factors Influencing TB/HIV Practices

- VCT
  - Late 1990’s – Rapid HIV testing – dramatic increase in uptake of VCT
  - Push to offer care (e.g., IPT)
- AIDS Treatment
  - 1980’s and early 1990’s – palliative care
  - Late 1990’s – AZT, treatment of OI’s (CTX, IPT)
  - 2001 – HAART

External Factors Influencing TB/HIV Practices

- Financial Resources
  - 2000 – Dramatic increases for TB and AIDS globally, but not necessarily locally
- Human Resources
  - Diminished locally, due to AIDS mortality, siphoning off of health care workers to other countries
  - Increased globally – new partners
External Factors Influencing TB/HIV Practices

- Economic Conditions – Declining locally
- Health Care Delivery – Increased reliance on community-based care
- Health Sector – Health sector reform/development generally promoting decentralization, privatization, integration of services

Challenges to Linking TB and AIDS Activities

- Increased stigma in linking 2 diseases
- Adds more activities to overburdened TB programs
- Different approaches
  - HIV/AIDS – prevention-oriented, behavioral
  - TB – clinically oriented
- Differences in resources
  - AIDS programs – often greater resources, higher salaries

Strategies for Moving Forward

- Promote communication between TB and AIDS Programs
  - At national, district, and local levels, set up HIV/TB committees and have regular staff meetings
  - Promote representation
    - TB Program on AIDS Committees
    - AIDS Program on TB Committees

Strategies

- Link TB and HIV/AIDS policies
  - Promote inclusion of screening, treatment, and prevention of TB in written NACP plans
  - Incorporate HIV counseling and testing, condom promotion, and safe needle practices into TB written plans
- Facilitate Integration of patient care for TB and PLWA
  - Include TB in country HIV care agenda
  - Link TB and AIDS home-based care activities for PLWA

Strategies

- Synchronize advocacy efforts
  - Promote joint TB and HIV/AIDS community information and education campaigns (IEC)
- Promote cross-training of HIV and TB health care workers
- Collaborate on monitoring and evaluation
  - Conduct joint TB and AIDS program reviews
  - Develop simple indicators which link 2 programs

Strategies

- Cultivate new partners, including each other
  - Patients and community
  - NACP and NTP
  - NGO’s, CBO’s, donors supporting AIDS treatment/care and DOTS expansion
  - Academic institutions implementing HAART in countries
  - Provincial and district level health teams and TB and AIDS coordinators
Ethical Guidelines for Human Subjects Research: 
Lessons from the BOTUSA Project

Elizabeth A. Talbot MD
The BOTUSA Project, Botswana
Centers for Disease Control and Prevention

The BOTUSA Project

• Established 1995 for TB/HIV research
• Collaborative project of BMOH and CDC
• International collaboration with SATCI, Health Coordination Unit of SADC, WHO, UNICEF, UCSF, Fogarty Foundation, FDA, and USAID RCSA
• 1998 Congressional LIFE Initiative for HIV/AIDS program support

BOTUSA Project Research Strategies

• Collaborative agenda
• Balance: include basic, social science, operations and clinical research
• Research that contributes to
  – Botswana TB control
  – Regional TB control
  – International TB/HIV knowledge

Codification of Ethics

• Nuremberg Code of 1947
• Declaration of Helsinki, 1964
• Belmont Report 1979
  – 45CFR46
• International Ethical Guidelines for Biomedical Research Involving Human Subjects of 1982, 1993

Three Guiding Principles for Ethical Research

• Respect for persons
  – Autonomous agents
  – If not capable of autonomy, entitled to protection
• Beneficence
  – Do no harm
  – Maximize benefit, minimize harm
• Justice
  – Who receives benefit of research?
  – Who bears burden of research?

Seven Practical Concepts for Ethical Research

• Value
• Scientific validity
• Fair subject selection
• Favorable risk-benefit ratio
• Respect for enrolled subjects
• Informed consent
• Independent review
Informed Consent

• Informed, not necessarily written
• Must be given freely
• Process must include discussion of
  – Nature and procedures
  – Potential risks/benefits
  – Assurance that participation is voluntary and withdrawal optional
  – Information about confidentiality
  – Liability and resources, if hurt

Seven Practical Concepts for Ethical Research, cont’d

• Value
• Scientific validity
• Fair subject selection
• Favorable risk-benefit ratio
• Respect for enrolled subjects
• Informed consent
• Independent review

Ethical Review Procedures

• All research must be approved by scientific and ethical review
• Independent review must be undertaken in community where research to be done
• Standards must be at least as rigorous as each investigators’ communities
• Members should include health professionals, ethics and legal experts, and have lay persons representing community’s cultural and moral values

Is it Research?

A systematic investigation, including development, testing, and evaluation, designed to produce generalizable knowledge

Examples of Non-Research Activities

• Emergency response
• Rapid assessment for TB in prison
• Program evaluations
• Annual risk of TB infection study
• Surveillance
• AntiTB drug resistance surveys
• Sentinel HIV surveillance
Sponsored Research in Developing Countries

- May serve external rather than local interests
- May lack insight into local mores, customs, laws
- May lack long-term commitment
- May lack accountability

Case 1: Standard of Care

- The optimal duration of IPT in HIV+ persons in settings of high TB incidence is not well-known
- Objective: Compare limited vs continuous IPT
- Methods: 2,000 HIV-infected randomized to one of two arms through IPT centers
- Cotrimoxazole for all who qualify

Case 2: Placebo-Controlled Trials

- “If there is an accepted drug for the condition that a candidate drug is designed to treat, placebo for controls usually cannot be justified”
- However, what if the “accepted drug” has not been accepted locally?
- Proposal for trial testing cotrimoxazole vs placebo rejected

Case 3: Meaningful Informed Consent

- ARI studies TST school children 0-9 yrs to measure burden of TB infection and evaluate TB program effectiveness
- Objective: ARI survey in Botswana
- Method: TST 2400 children/yr X 3 yrs
- In US, but not Botswana, written parental consent would be required

Case 4: HIV Testing and Reporting

- TB serodagnostic technology would improve TB diagnosis, esp in HIV+
- Obj: Compare conventional diagnostic methods vs. newly-developed serodagnostic in HIV+ persons
- Methods: 400 inpatient TB suspects, consent for study and HIV testing
- Per Botswana MOH policy, participants may decline to know their HIV status, but in US, HIV results must be reported

Disputed Standard of Care

Is cotrimoxazole truly the international standard of care?
- Resistance pattern not known
- Spectrum of OI’s same as Cote d’Ivoire?
- Botswana counterparts decline widespread use of cotrimoxazole without more data
Case 5: Authorship

- BCG is a live vaccine capable of causing sepsis and death in immunocompromised
- Obj: How common is disseminated BCG among HIV-infected children?
- Methods: Confirm index hospital case, survey world literature for adverse rxns
- Project completed, accepted at journal. During revision, doctor who identified index case claimed rights to authorship

Authorship

- It is as unethical to include a non-author as author as it is to exclude a legitimate author
- Journal and institutional guidelines for authorship usually require:
  - Design work, collect, analyze, and interpret data
  - Draft, review and revise manuscript
  - Assume responsibility for final

Ethical Issues of International Research

- Do international declarations define what is ethical?
- Principle of “standard of care” must be interpreted in social, economic, and political milieu
- International research ethics need to confront enormous inequities in global health
Cost and cost-effectiveness analysis of ProTEST activities

Lilani Kumaranayake

Research team

- At London School of Hygiene and Tropical Medicine
  - Lilani Kumaranayake
  - Charlotte Watts
  - Peter Godfrey-Faussett
  - Fern Terris-Prestholt
  - Peter Vickerman

Acknowledgements

- Overall ProTEST evaluation funded by WHO
- Additional country funding by
  - DFID in Zambia
  - NORAD in Malawi

Outline of session

- Overall objectives of cost and cost-effectiveness analysis
- Time-frame and current status
- Preliminary results from Zambia

Cost and cost-effectiveness Analysis

Purpose of evaluation

- Delivery of preventive therapy (PT) within a ProTEST context is still in early phase of implementation
- There is little known of costs, cost-effectiveness of such initiatives on reducing transmission of HIV and TB infection
Purpose of evaluation (2)

- Each country with ProTEST activities has little variation in nature of activities
- Little knowledge of how different methods of implementing activities will affect overall cost and cost-effectiveness of ProTEST

Evaluation needs to consider different aspects

- the impact of incentives on the use of VCT services
- the impact of VCT on behaviour change, in order to estimate the number of HIV infections averted due to ProTEST activities, and by extension the number of TB cases averted
- the impact of VCT on the uptake of PT
- the use of PT by VCT clients (e.g. compliance) in order to estimate the number of TB cases averted

Conceptual Approach to evaluation

- Impact depends on type of activities
- Flow chart on next slide shows conceptual approach behind measurement of impact and cost-effectiveness

Activities related to evaluation

- Cost Analysis (in Zambia, Malawi, South Africa, Uganda)
- Behavioural surveys (Zambia, Malawi)
  - to measure behaviour change
- Model development of VCT model
  - to estimate HIV infections averted from behaviour change information
- Economic Analysis
  - cost-effectiveness, feasibility, sustainability

Expected outputs of evaluation

- Generic evaluation framework for ProTEST projects.
- Guidelines and protocol for estimating the cost and cost-effectiveness of ProTEST projects.
- VCT/HIV mathematical model and accompanying manual, which can be used to estimate the impact of VCT activities on the number of HIV infections averted by a project.
- Guidelines and tools for collection and analysis of behavioural surveys with respect to ProTEST projects.
**Expected outputs of evaluation (2)**

- Cost analysis and cost-effectiveness analysis using intermediate outcome measures (such as cost per person completing course of PT), for all sites in the 4 ProTEST projects.
- Cost-effectiveness of PT for 2 projects.
- Cost-effectiveness of ProTEST for 2 projects.
- Assessment of factors influencing costs and cost-effectiveness from the experience of the 4 projects.
- Dissemination of findings

**Time-frame and current status of evaluation**

**Cost Analysis**

- Zambia: Costs of DFID-funded phase of ProTEST collected and analysed. Cost data collection of ProTEST-MTCT to begin in March/April once activities have began.
- South Africa: Cost data collection began.
- Uganda: Awaiting initiation of ProTEST activities.

**Behavioural Surveys**

- Questionnaires, protocols developed and field-tested
- First phase of behavioural survey commenced in Malawi; follow-up survey to commence in three months
- South Africa also likely to undertake behavioural surveys
- Behavioural surveys in Zambia to commence in 2002

**Model and economic analysis**

- Model development undertaken in 2002
- Anticipate behavioural survey results and cost-effectiveness analysis for Malawi by end of 2002
- Zambia results will be available in 2003

**Preliminary Cost Results from ProTEST, Zambia**

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Methods

- Cost data collection in 2 sites (Chawama and Matero)
- Retrospective and ingredients-based
- Financial costs: actual expenditure on goods and services
- Economic costs: include value for resources used even if no financial transactions

Two approaches to costing ProTEST

1. Costs of co-ordinating and implementing all ProTEST-related activities (e.g. running VCT centre, ProTEST clinic)
2. Costs of co-ordination activities related to ProTEST

Total costs of co-ordination and implementation

Activities:
- ProTEST co-ordination
- ProTEST clinic
- VCT
- PT
- Outreach
- Community home-based care
- Hospice

Total costs of co-ordination and implementation

- Over two sites US $105,731 in 2001
- Co-ordination: US $3504 in Chawama and $4030 in Matero
- VCT costs: US $43,719 in Chawama and US $7894 in Matero
- Cost of adding PT: US $576 in Chawama and US $795 in Matero

Average costs

<table>
<thead>
<tr>
<th>Economic costs, US $</th>
<th>Chawama</th>
<th>Matero</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cost per clinic visit</td>
<td>6</td>
<td>8</td>
</tr>
<tr>
<td>Cost per person tested</td>
<td>28</td>
<td>30</td>
</tr>
<tr>
<td>Cost per person returning for VCT result</td>
<td>12</td>
<td>15</td>
</tr>
<tr>
<td>Cost per person starting PT</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Cost per person completing PT</td>
<td>16</td>
<td>23</td>
</tr>
<tr>
<td>Cost per person reached by ProTEST-related activities (exclude HBC, hospice)</td>
<td>28</td>
<td></td>
</tr>
</tbody>
</table>
Factors influencing costs

- Inclusion/exclusion of start-up costs
- Advanced stage of HIV+ people meant small numbers eligible for start of PT
- Gaps in Matero activities
- Low rates of compliance of PT
  - Chawama: 19% completing 6 months
  - Matero: 47% completing 6 months
- Despite this, still relative low average costs for these services
P.C. Onyebujoh June 2002

The ProTEST initiative was conceived and developed by WHO, as a response to the unprecedented scale of the epidemic of HIV-related TB. Its aim was to develop, through operational research; a district based strategy for a joint TB and HIV programme approach to the problem. The approach entails the promotion of voluntary counselling and testing as an entry point into a package of interventions aimed at reducing the dual burden of HIV/TB. Over the past two to three years, pilot projects have started up in Malawi, Zambia, South Africa and Uganda.

The intention was to develop and evaluate the feasibility and cost-effectiveness of a set of interventions to decrease the burden of HIV-related TB. The main entry point to these packages of interventions was HIV counselling and testing, which led to the following interventions.

- Improved case-finding and treatment to reduce transmission of \textit{M.tuberculosis}
- Preventive therapy services to reduce reactivation and reinfection of \textit{M.tuberculosis}
- Preventive interventions (Condom promotion, treatment of STIs etc.) to reduce transmission of HIV.

This update reviews the current data available to WHO and assesses how far we have progressed in acquiring evidence for the interventions we are promoting through the pilot projects located in the three countries that have been running ProTEST projects since 1999. This will inform the activities following on from the ProTEST initiative. The traditional way of developing evidence for implementation of complex health interventions is to establish pilot projects, often for three years, then derive the results and policy implications and then plan more widespread implementation. The urgency of the need to respond to the TB/HIV epidemic is such that we need to speed up this process by “learning while doing.” The approach, discussed and endorsed by STAG-TB and which WHO is now promoting, is to develop in priority countries, a national plan over three to five years for the implementation of TB/HIV interventions, with activities starting in pilot sites and expanding in a step by step fashion (i.e. phased implementation) until achieving complete National coverage. The step by step expansion proceeds, using the lessons learned in the initial pilot sites then subsequent sites of implementation.

The ProTEST pilot projects are currently being evaluated for cost and cost effectiveness of the interventions being utilised. Since the start of activities in 1999, funding for the projects has come mainly through partner and country funds, with some contributions from WHO. The expenditure to date is described in Annex 1.
South Africa

TB/HIV Pilot Districts were established in four provinces in 1999 by the South African National Department of Health (SANDOH). SANDOH, is directly funding three of the sites and the South African Equity Project funds the Eastern Cape site. These were eventually linked to the network of the ProTEST initiative to benefit from experiences of TB and HIV collaboration in other countries. Two of the sites are urban/perirurban districts (East London in Eastern Cape; Central District in Western Cape) and two are rural (Ugu South in KwaZulu-Natal; Bushbuck Ridge, in Northern Province). There are 6 hospitals and 41 clinics participating in ProTEST activities.

I. Objectives

1. To facilitate collaboration between TB/HIV public and private stakeholders at district level
2. To increase access to voluntary HIV counselling and rapid testing (VCT)
3. To improve TB case finding, TB treatment completion and TB cure rates among people living with HIV/AIDS (PLWHA) through community involvement
4. To improve access to sustainable Isoniazid preventive therapy (IPT) for PLWA and evaluate its feasibility and cost-effectiveness
5. To improve comprehensive HIV/AIDS/STI/TB care and referral (including cotrimoxazole prophylaxis) to ensure continuity of care for PLWA.
6. To undertake an economic evaluation of the interventions.

II. Results

Data has been collected from the principal investigators, quarterly. The information is collected through preformatted reporting and recording sheets. There is some local site variation.

VCT activities
Total number of VCT clients: 31,456 with 10,211 testing positive for HIV. The total catchment population is approximately 722,000 (361,500 adult population). Total population screened for HIV (31,456) is approximately 9% of adult population of pilot district (assuming no repeat testing).

There was a 290% increase in uptake since inception in 1999 to Q4 2001. There has been a gradual shift of clients from medically referred to self-referred: from 10% to 42% in Ugu South, from 0 to 71% in Bushbuck Ridge and from 60% to 75% in Central District. This is largely attributable to the introduction of rapid tests against the background of an unmet demand for HIV testing.

Isoniazid Preventive Therapy (IPT)
IPT activities started in 2000. In the four sites combined there were 4,078 HIV-positive clients who were screened for IPT. Of those screened, 1,810 clients (44%) started on IPT. The Central District started IPT in April 2000 and out of 1,265 clients screened 285 (23%) started IPT. The low proportion of screened clients starting IPT in the Central District is explained by the inclusion of tuberculin skin testing in IPT screening in that district and not in other districts. Adherence to IPT and CPT varied
dramatically between sites and no adherence data was available from East London. Adherence to 6 months of IPT in people who started in the third quarter of 2000 was 13% in Ugu South, 46% in Bushbuck Ridge and 63% in Central District, indicating the importance of a good health system and infrastructure in ensuring compliance to this intervention. These data are preliminary, as work is ongoing.

**Cotrimoxazole Preventive Therapy (CPT)**

In the four sites combined there were 3,636 people screened for CPT. A total of 1,218 (34%) were started on CPT. Adherence to six months of CPT among clients who commenced therapy in the third quarter of 2000 was 5% in Ugu South, 32% in Bushbuck Ridge and 64% in the Central District. The total number of eligible clients from which 3,636 clients were screened for CPT was not made available at this time. No adherence data was forthcoming from the Eastern Cape.

**Intensive case finding for TB**

In the Central district of the Western Cape, out of 1,265 HIV positive clients screened between April 2000 and December 2001, 220 (17%) were TB suspects (fever, cough>3wks, weight loss, night sweats, emaciated) and 77 (5%) were diagnosed with sputum positive TB (smear or culture positive). The total number of HIV positive clients detected during this period in the Central District from which this proportion was screened for TB was not made available.

In a preliminary analysis of data from East London in the fourth quarter of 2001, out of 356 HIV-positive clients screened for IPT, 50 (14%) had smear-positive TB diagnosed as a result of screening.

In Ugu South, out of 1,684 clients screened for IPT, 471 (28%) were TB suspects: 198 (12%) had weight loss, 130 (8%) had a cough, 124 (7%) had night sweats, 14 (1%) appeared emaciated or sick and 5 (0.3%) were febrile (temperature > 38ºC). It is not known what proportion of symptomatic clients were diagnosed with TB. The total number of HIV positive clients was not made available.

No data was available on active TB case finding from Bushbuck Ridge.

**III. Discussion**

Protest Pilot projects in South Africa have shown the following:

1. The pilot sites have demonstrated the feasibility of collaboration between TB, HIV/AIDS, and STI services at district level and have helped build capacity of provincial and district managers in these programmes.
2. The uptake of VCT services can be considerably increased through the introduction of rapid tests.
3. The importance of district health committees involving key role players in improving collaboration and continuity of care. This underlines the need for involvement of community structures and creation of local political commitment for the success of joint TB and HIV collaborative activities.
4. Adherence to IPT remains a challenge and improvement might be linked to poverty alleviation (ongoing programme), improvement in health centre access,
addressing clients’ concerns about side effects, implementing reliable drug supply systems and encouraging and eliciting the participation of support groups. A questionnaire survey to elicit reasons for poor compliance is ongoing.

5. Intensive case-finding needs to be improved drastically as this is not being documented adequately by the sites. This may be attained through developing more user-friendly reporting and recording formats and linking the project data collection format to the standard TB registers utilising the same HCWs to record information.

6. The importance of good referral networks in optimising the benefits of promoting VCT as an entry point to a package of interventions and services.

IV. Next steps

The pilot district coordinators in conjunction with the Provincial HIV/AIDS/STI and TB coordinators have finalised plans for roll out. This has been incorporated into the five-year medium term plans. The Belgium Government and the Government of South Africa, are jointly financing this next phase. The funds will cover support of the pilot districts for the third year and facilitate the establishment of TB/HIV training districts in 90% of all health districts in South Africa from 2002-2007. With the success of the South African application to the Global funds for AIDS, TB and Malaria (GFATM), it is expected that the resources provided will be utilised to expand further collaborative TB and HIV programme activities.

Provincial Heads of Health through the interaction with the ProTEST management team have agreed to implement lessons learned through the Pilots in TB/HIV Training Districts across the country. South Africa, one of the few countries conducting pilot evaluations of joint TB and HIV programme activities, is unique in providing the larger share of funding for planned activities. Roll out plans have been developed to gradually phase-in activities to cover other districts as is currently being promoted by WHO and partners.

Malawi

The Governments of Malawi and Norway (NORAD) fund the ProTEST initiative, with a technical assistance from WHO. Implementation began in August 1999. The project is designed to run over three years. The project activities have been developed by the Malawi National TB control Programme (NTP) in partnership with:

- National AIDS Control Programme (NACP)
- Lilongwe Central Hospital (LCH)
- Malawi AIDS Counselling and Resource Organization (MACRO)
- Malawi network of people living with HIV/AIDS
- National association of people living with HIV/AIDS in Malawi (NAPHAM)
- Lilongwe home-based care group
- Lighthouse Project
The District Health Office of the Ministry of Health (DHO)  
WHO

The project in Lilongwe was developed around stakeholders and potential partners already involved in HIV or TB activities at district level. Urban Lilongwe was chosen as a result of the NTP headquarters presence and the existence of a free-standing VCT site.

The aim of the Project was to reduce the incidence of HIV-related TB

I. Objectives

1. Establish collaboration between TB and HIV/AIDS service providers
2. Establish accessible VCT services at district level
3. Establish a network including home based care that will allow comprehensive care and support
4. Ensure the prevention and management of opportunistic infections at hospital and community levels
5. Increase community mobilisation and empowerment in HIV/TB care and impact mitigation
6. Establish nutritional support programme for HIV/TB patients at hospital and in the community
7. Provision of care and support services to PLWHAs
8. Build capacity within current initiatives addressing TB and HIV management. The activities focused on the following:
   – promotion of VCT and other HIV prevention strategies;
   – active TB case detection; and
   – provision of TB preventive therapy for PLWHAs

II. Results

The data shown is based on quarterly reports sent to WHO by the Principal investigator and staff.

VCT activities (Free-standing): 27,170 clients were counselled and tested for HIV and 5,488 (20%) tested positive from February 2000 to December 2001. Population of catchment area: 450,000 (225,000 adult pop). Total population screened for HIV (27,170+ 1657) is approximately 13% of adult population of pilot district (If we assume no repeat testing).

VCT activities (Hospital-based): From April 2000 to December 2001, 1,657 clients assessed VCT at Bottom Hospital, out of which 1,169 (70%) were HIV Positive. However it is important to note that 113 (7%) either refused to know their results, results could not be found or refused testing. Among those accepting testing 378 (23%) tested negative for HIV.

Isoniazid Preventive Therapy (IPT)

By the end of December 2001 544 (10% of total HIV positives) clients were screened for IPT at MACRO. IPT was recommended in 506 (93%) clients but only
465 (85%) actually started. Out of the 465 who started IPT, 288 (62%), were registered in the first six months of the year and only 83 (29%) of these had completed 6 months IPT by December 2001. Adherence has been extremely poor. The data is going to be cleaned when the new data manager starts working on the project later this year. There is still the need to document the total number of people evaluated for IPT and the number of dropouts at each stage of evaluation.

**Cotrimoxazole Preventive Therapy (CPT)**

Cotrimoxazole prophylaxis (CPT) for TB patients was commenced in April 2000 and by December 2001, 908 (10%) TB patients out of a total of 8801 TB patients, who had started TB treatment in Lilongwe, had been given CPT. No data was provided for the HIV status of the 8801 TB patients screened for CPT administration. Out of these CPT recipients, 454 (50%) were started on CPT within 30 days of having registered for TB treatment. It is not clear whether all these patients passed through the ProTEST site or were given CPT as TB patients irrespective of ProTEST pilot activities. No data on the number of patients still adhering to CPT at this time point was given. However an earlier report shows that from April to December 2001, of the 441 TB patients who started CPT in the pilot district, 376 (83%) were still continuing treatment by April 2001. It is not clear why so few patients qualified to receive CPT. The investigators have indicated that low morale among government employed HCWs, working with ProTEST clients, may have led to insufficient information being made available to prospective clients and hence poor recruitment for CPT.

**Intensive case finding for TB**

Between November 2000 and July 2001 10,135 clients accessed VCT at MACRO VCT centers, 78 were already on TB treatment and were not screened further. 152 had cough in excess of 3 weeks. 80 of these clients who were not already being screened for TB were asked to submit sputum and 8 of these were AFB positive while 7 were AFB negative but culture positive. It is unclear how many HIV positive clients were screened for TB and how many of the 10,135 clients who accessed VCT were found positive for HIV. The yield of infectious TB is rather small since according to the investigators, the majority of MACRO clients are fit, healthy and HIV-negative. At Bottom hospital that largely caters for TB cases, a majority of the patients are sent to VCT rooms only after a TB diagnosis has been made. Data acquired through the Home based care providers is currently being analysed.

**District collaboration between stakeholders and service providers**

There has been a successful interaction between the ProTEST investigators and various stakeholders. The NTP management linked to the ProTEST management group (PMG) has developed the five-year medium term development plan for roll out of some of the ProTEST activities. The impediments to successful expansion include:

- Donor reluctance to fund activities considered exclusive to HIV/AIDS (HIV testing, HIV prevention activities, etc.)
- The inclusion of these activities as part of the essential health package and as prerequisite to phased implementation of joint TB and HIV programe activities
- Absence of a body within the MOHP central, to ensure implementation of the essential package at the district level. This refers specifically to the anticipated function of the NACP
• Donors criticised the five-year plan as not adequately addressing the way in which the health sector is currently organised to bring it in line with the sector wide approach to health and decentralisation of services
• The challenge of improving adherence to IPT, CPT and ensuring proper documentation of TB cases seen at VCT sites.

III. Discussion

ProTEST in Malawi has been able to show the following:
1. The feasibility of collaborative TB and HIV programme activities at district service level
2. The huge unmet demand for VCT activities, as evidenced by the increased uptake at VCT centres, linked to the introduction of rapid tests
3. The importance of targeting different population for VCT uptake. Populations with low HIV yield will benefit most from counselling for behaviour change to reduce transmission rates, while high HIV yield populations will benefit from intensive case finding for TB, IPT, CPT etc, that will improve the quality of life and over time impact on the caseload for TB. Thus a mixture of stand-alone and hospital based VCT centres should be promoted as they attract different groups of clients
4. The difficulty in ensuring good adherence to preventive therapy (IPT and CPT)
5. The need to improve human capacity to meet the huge increase in activities as implementation starts
6. The presence of a focal coordinating body/person to coordinate HIV/TB activities has been identified as a catalyst for cooperation and partnership between stakeholders within the district
7. Regular meetings of district HIV/TB stakeholders have aided collaboration, networking and sharing experiences
8. Capacity is lacking in some district TB/HIV service providers. This will inform the specific training requirements

IV. Next steps

ProTEST management is currently trying to reach a consensus with the donors and the MOHP regarding the method for implementing the successful lessons of ProTEST pilots into programme-based activities. Since the Nairobi meeting the following have been accomplished:

• Formation of a National TB/HIV steering committee chaired by the Principal Secretary of the Ministry of Health
• Formation of a National TB/HIV Working group chaired by the NTP manager
• Finalisation of a three-year proposal for phased implementation activities with full coverage of all districts in the third year
• Identification of seven districts to start the expansion of TB/HIV collaborative activities
• Extension of the initial funding for the ProTEST pilot in Lilongwe from July to December 2002, to facilitate smooth transition from pilots to implementation
- Increased pressure to acquire data from the cost-effectiveness and behaviour studies ongoing in Lilongwe

**Other challenges and constraints of the Pilot project in Lilongwe:**

1. The Investigators have identified the location of the project “in the Central Unit of the NTLP rather than at the District Health Office as a weakness”
2. No mechanism in place for the MOH/DHO to take over ProTEST activities in the absence of direct NTLP involvement
3. The reporting of activities requires attention to enable the demonstration of the impact of ProTEST. Improvement of the recording system utilised in documenting TB cases detected through active screening of suspects attending VCT sites is urgently needed.
4. Data so far generated is strong on collaborative activities and weak on hard TB issues (ACF, IPT adherence; treatment outcomes)

The pilot project in Lilongwe has not been able to adequately utilise the opportunities presented by VCT services to detect infectious TB cases. This may be due to a larger number of “healthy clients” volunteering for testing at VCT sites.

The perception of the ProTEST as another “project” is changing, especially after the Nairobi workshop. There is improved participation of the Health services in discussions about expansion of the TB and HIV collaborative activities. The investigators have similarly indicated a change in the response of consultants and donors since the Nairobi meeting highlighting the importance of advocacy to TB/HIV programme collaboration. The challenge is to get all role players to agree on the successful activities of the pilot project that can be rolled out in a phased manner to other districts.

**Zambia**

The Zambian ProTEST project started in October 1999 in Lusaka funded by DFID. The sites, which commenced activities, were Chawama and Matero. In 2001 WHO approved and transferred funds for the Chipata site to commence PMTCT-ProTEST pilot project.

The overall goal of the ProTEST pilot project is to reduce the incidence of HIV-related TB.

**I. Objectives**

1. To promote VCT services and associated support services as an entry point to integrated management and prevention of HIV-related TB
2. To establish a service for active TB case-finding among people living with HIV (PLWH)
3. To establish a service for preventing disease in PLWHs without active TB
4. To enhance collaboration and establish referral mechanisms between government health services and community organisations
5. To increase attention to the combined problem of TB and HIV in social mobilisation activities
6. To analyse the costs and benefits of each component
7. To analyse the penetration of knowledge about and equity of the services offered.

II. Results

VCT activities VCT uptake from three centers (Matero and Chawama and Chipata) show that between January 1999 and March 2002 there were 12,697 clients of which 7,221 (57%) were tested and 2,019 (29%) were found to be HIV positive. Catchment Population: 366,766 (183,383 adult pop). It must be noted that frequently, group counselling especially among adolescents is quite common, hence the disparity between clients counselled and those accepting testing. Other reasons for dropout among the counselled population, includes, fear of test outcome, stigma, etc. Total population screened for HIV (7,221) is approximately 4% of adult population of pilot district (If we assume no repeat testing done)

Preventive therapy with INH
Total number of clients who met the criteria for IPT from January 1999 to March 2002 was 1,468 but only 765 (52%) actually started IPT. Out of 568 (Matero) clients who started IPT only 98 (17%) completed 6 months therapy. There is no data on the adherence in other sites. Hunger and stigma have been associated with IPT use by clients.

Preventive therapy with cotrimoxazole
This is not being evaluated by any of the ProTEST sites in Lusaka.

Intensive case finding for TB
From January 1999 to March 2002 a total of 150 (7%) TB cases have been actively detected from a total of 2,019 HIV positive clients in all three sites. The contribution of these TB cases to the total TB cases detected in that district is not known.

District collaboration between stakeholders and service providers
The Lusaka Urban District Health Management team (LUDHMT) runs the clinics through which the ProTEST projects operate. The LUDHMT is linked to Kara counselling (main provider of VCT services) and to the Zambart project at the University Teaching Hospital, from where the ProTEST project management team coordinate activities. The reporting line is to the Directorate for public Health and Research at the Central Board of Health (CBoH). The ProTEST project activities are an integral part of district health care and thus have the potential for expansion.

III. Discussion
The ProTEST projects in Lusaka have been able to show that
1. TB and HIV programme collaboration is feasible and catalyses the provision of diverse services.

2. Men are more likely to utilise VCT services than women and the increased uptake at VCT sites has been linked to both the introduction of rapid tests and mobilisers (people utilised in outreach programmes to encourage HIV testing). The low uptake by women has been explained by the extreme stigma attached to women visiting VCT centers irrespective of outcome.

3. Improved health care worker capacity has been associated with ProTEST activities.

4. The feasibility of preventive therapy with INH has been impeded by poor adherence (studies addressing reasons for poor adherence implicate non-disclosure as a strong predictor for non-compliance).

5. Case finding for TB is good and may be optimised through improvements in the management and referral systems, and the revival of formal TB clinics linked to ProTEST sites.

6. The potential for joint TB and HIV activities to improve service delivery especially at district level, through provision and improvement of logistics (drug supply, transport, diagnosis etc) and improved quality of care through access to well trained HCW (joint TB and HIV/AIDS programme HCWs running the referral networks and the clinic facilities).

Similar to other pilot sites in Malawi and South Africa, the Zambian investigators have been asked to develop plans for expansion from the initial pilot sites to other district in a stepwise manner. However critical to these activities is the reactivation of the NTP through the district services. The CBoH and LUDHMT have developed a strategy to reactivate the NTP. These include:

- Appointment and Training of Provincial and District TB Focal Persons
- Promoting the formation of TB committees at the Province comprised of Preventive Health Director, TB focal person, and other members of the Provincial Office.
- Development 22 demonstration and training districts (DOTS) and follow up visit to assess progress.
- Planning of a National TB Conference in May (27-30) that is targeted at the Provincial team and the District as well as community-based organisations. This is aimed at provision of information and generation of discussions about how best to implement the DOTS strategy. Assistance is being provided through WHO and other technical partners.
- LUDHMT has included ProTEST in their action plan for the year 2002 aimed at gradually taking over the sites and expanding the activities to other Health centres.

In spite of these measures the drawback to expansion appears to be the absence of a National approach to utilising the lessons learned from the ProTEST projects to scale out in other districts. Effective action appears to be impeded by the frequent change in the administrative personnel, severe lack of resources, and the absence of a National committee directing HIV/AIDS/TB activities.
IV. Next steps

Since the Nairobi meeting, however, there have been plans developed to expand the successful lessons learned from ProTEST to other Provinces. A National TB/HIV working group to coordinate these activities has been formed. Donor and technical support for these initiatives is required urgently. As formal TB control programme activities start it is expected that improvement in the referral mechanism, the presence of the DOTS strategy operationalised through TB clinics, linked to sites of TB and HIV collaborative activity, will improve the impact of joint TB and HIV programme activities. Zambia was successful in its application for funds to the GFATM. The HIV component was funded to the tune of 92.8 million US dollars, whilst the TB component was marked for deferred funding to the tune of 59.8 million US dollars. This will provide the much-needed resources for expansion of activities.
Summary of achievements and constraints documented through the conduct of ProTEST pilot projects (1999-2002)

Between 1999 and Quarter 1 2002, the Protest pilot projects were able to detect 18,887 HIV positive clients, among 67,504 clients, approximately 28% of the population tested, (assuming no repeat testing). In that same period 5,308 (28%) HIV positive clients received INH preventive therapy whilst 2,126 client received cotrimoxazole prophylaxis. The total number of TB cases detected through active screening of the HIV positive cohort in these three countries was 292 or 1.5% of the total HIV positive clients detected.

The weakest component of the interventions promoted through ProTEST in the three countries running the pilot projects, has been the detection of infectious TB cases. This failure has been attributed to various factors including: a) sub-optimal management and referral systems, b) poor reporting and recording mechanisms, c) Absence of trained multi-skilled HCWs that can potentially support VCT activities and act as treatment supporters within TB treatment services, d) Poor diagnostic and TB service access within ProTEST project sites.

It is important to highlight the impact of ProTEST in developing service networks where they did not exist. The requirements for maintaining these networks depends on improvement in logistical support (transport, drug and reagent supply etc) which ProTEST projects were able to provide. In peri-urban and rural communities, there has been improvement in the “stock-out” situation and in diagnostic efficiency, especially in sites where the treatment centres are distinct from the diagnostic centres. Improved service delivery through joint programme activities has been clearly demonstrated by the ProTEST projects.

The projects have in general demonstrated:

1. The feasibility of joint TB and HIV programme activities at the service level
2. ProTEST has catalysed district level collaboration as a useful method of utilising diverse services
3. The importance of training and improved human capacity to accommodate the demands of phased implementation activities
4. ProTEST has provided the mechanism to make available a wide range of options to clients (eg. CPT, STI treatment and other OIs, in addition to VCT, DOTS and IPT).
5. The profound impact of the introduction of rapid tests in improving VCT uptake.

The pertinent questions at this stage are:

- What is the impact of VCT uptake on sexual behaviour (HIV averted?)
- What is the cost and the cost-effectiveness of the interventions promoted?
- How do we improve case finding for TB?
- Why are project sites documenting poor adherence to IPT and CPT?
- Does preventive therapy with IPT and CPT have any impact on VCT uptake and are we justified in promoting their use given the difficulties in ensuring compliance?
• If HAART is to be introduced, how do we ensure compliance, given the poor adherence so far documented with preventive therapy?
• What other interventions can we add to the package, that are cost-effective?
• How do we ensure that these activities are integrated within programmes and sustained?
• How do we convince donors and potential stakeholders of the necessity for implementing joint TB and HIV activities?
• How do we ensure that we develop and sustain true collaboration with our partner programme, HIV/AIDS?

The first five questions are currently being addressed by ProTEST investigators and consultants. The introduction of HAART and ensuring compliance is ongoing in some centres and is expected to be widespread with the availability of funds from GFATM. Integration of joint activities into formal programme structures is the current step being undertaken by District and Provincial authorities in the pilot sites in Kenya, Ethiopia, Mozambique and Tanzania.

Phased implementation activities

The ProTEST initiative has evolved into phased implementation activities, which, as previously described is the stepwise implementation of collaborative TB and HIV programme activities in selected countries. It is expected that each phase of expansion of joint TB and HIV activities will build on the previous phase as these activities expand to cover districts in countries.

Next steps

WHO recently convened a proposal development workshop to develop proposals for the phased implementation of collaborative TB and HIV programme activities in Nairobi 11-15 February 2002. Eight countries (Ethiopia, Kenya, Mozambique, Tanzania, South Africa, Malawi, Uganda and Zambia) were invited to participate. Discussions and technical support from this workshop assisted Ethiopia, Zambia, and South Africa in developing the TB/HIV components of their proposals submitted to the Global Fund to Fight AIDS, Tuberculosis and Malaria. The first round of funding has now been announced and three of the eight countries currently involved in phased implementation activities have been earmarked to receive funds for the initiation of the proposed plans. Further refinement of plans for collaborative TB and HIV programme activities is expected to reflect the recommendations of the recently developed guidelines for phased implementation of activities.

This next phase in promoting collaborative TB and HIV programme activities will involve:

1. Development of a mechanism, for joint service provision at central and district levels by the NTP and NACP involving clear definition of responsibilities by each programme. This may be achieved through the formation of National TB/HIV Working groups or committees.
2. Development of a national collaborative TB/HIV strategic plan by both NTP and NACP.
3. Identification of districts suitable for initiating or expanding joint activities.
4. Development and incorporation of appropriate reporting and recording mechanisms for monitoring of activities.
5. Identification of human resource and capacity development requirements. This would necessitate, training more HCWs as joint programme activities expand within countries.
6. Implementation of interventions in specific districts linked to joint NTP/NACP service provision
7. Expansion of successful activities building on the achievements of the preceding phase.

The ProTEST Initiative has succeeded in showing that TB and HIV programmes can work together to improve services. The difficulties faced by the various sites in demonstrating evidence for the effectiveness of the interventions being promoted may be a reflection of the enormous operational difficulties at country-level in applying these interventions. ProTEST has succeeded by highlighting the gaps in the process and indicating the need to focus on certain areas to improve the delivery of interventions. The evolution of the ProTEST initiative to Phased implementation activities is a reflection of the solid foundation laid by ProTEST.
Annex 1

Funding for ProTEST pilot projects
WHO has provided technical assistance to the projects through WHO appointed external consultants and in-house technical staff. In addition funds have been provided for ProTEST project activities in target countries and support of national initiatives to promote TB and HIV programme collaboration.

Expenditure on all ProTEST projects from 1999-2002

<table>
<thead>
<tr>
<th>Country/Consultants/Activity</th>
<th>Donor/funding source</th>
<th>Donor funds received</th>
<th>WHO/Partner funds</th>
<th>Total funds received</th>
</tr>
</thead>
<tbody>
<tr>
<td>Zambia</td>
<td>DFID</td>
<td>US$ 170,000</td>
<td>US$ 69,520</td>
<td>US$ 239,520</td>
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<tr>
<td>Malawi</td>
<td>NORAD</td>
<td>US$300,000</td>
<td></td>
<td>US$ 300,000</td>
</tr>
<tr>
<td>South Africa</td>
<td>NDOH</td>
<td>US$678,000</td>
<td></td>
<td>US$ 678,000</td>
</tr>
<tr>
<td>Uganda</td>
<td></td>
<td>US$ 68,920</td>
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<tr>
<td>LSHTM</td>
<td></td>
<td>US$ 75,450</td>
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<tr>
<td>Workshops</td>
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<td>US$165,099</td>
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<tr>
<td>APWs</td>
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<td>US$154,880</td>
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<tr>
<td></td>
<td></td>
<td>US$533,869</td>
<td>US$ 1,217,520</td>
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</tr>
</tbody>
</table>

Total expenditure on ProTEST pilot projects in four countries (South Africa, Malawi, Zambia and Uganda) from 1999 to 2002 is estimated at US$ 1,751,389

At the end of Quarter 1 2002 the funds expended by WHO, on personnel and activities was US$ 533,869, with a commitment of US$ 365,000 to be utilised for the phased implementation of successful lessons from ProTEST within the year in Ethiopia, Tanzania, Kenya and Mozambique. Similarly US$ 135,000 has been earmarked for expansion of activities in Malawi, Zambia, Uganda and South Africa. The funds expended so far by WHO on the ProTEST pilot projects and funds earmarked for phased implementation of collaborative TB and HIV programme activities in identified countries have been provided by USAID and CDC.