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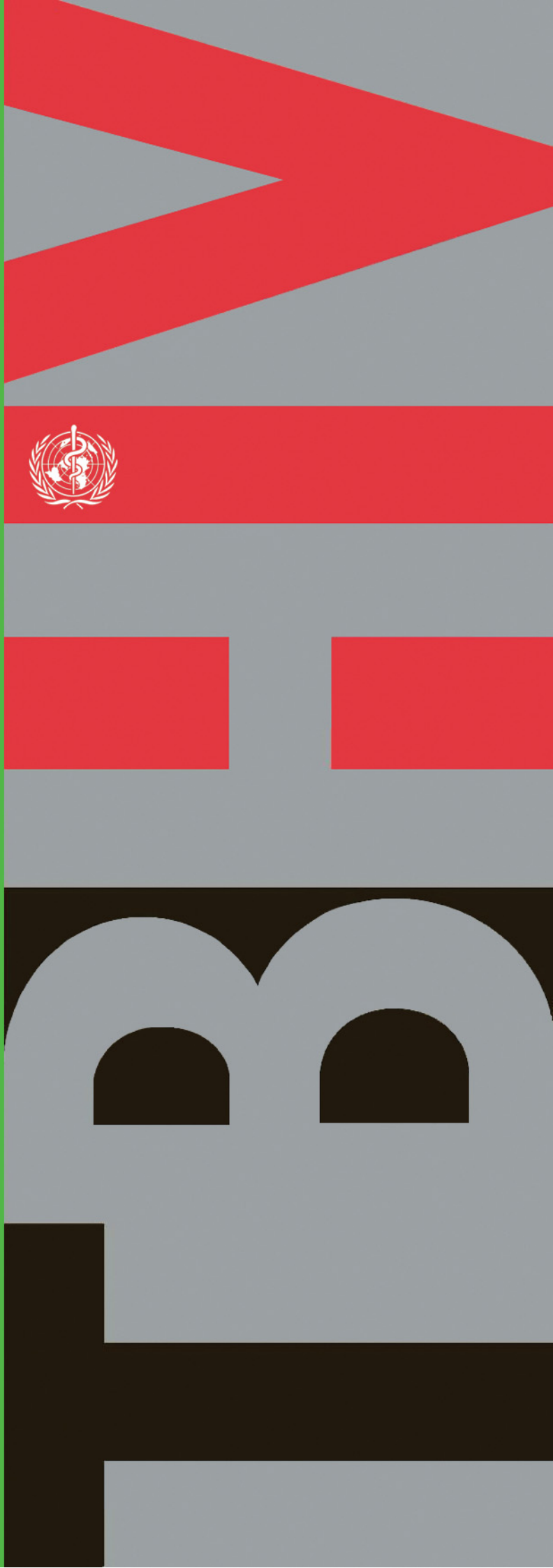
FIELD TEST VERSION

STOP TB PARTNERSHIP

3 million by 2005



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A guide to monitoring and evaluation for collaborative TB/HIV activities

FIELD TEST VERSION

Stop TB Department and Department of HIV/AIDS
World Health Organization
Geneva
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Contents

Acronyms and abbreviations

AIDS	acquired immunodeficiency syndrome
ART	antiretroviral therapy
CBO	community-based organization
CPT	co-trimoxazole preventive therapy
DOTS	the internationally recommended strategy for TB control
HIV	human immunodeficiency virus
IEC	information, education and communication
IPT	isoniazid preventive therapy
M&E	monitoring and evaluation
MDG	Millennium Development Goal
NACP	national AIDS control programme
NGO	nongovernmental organization
NTP	national tuberculosis programme
PLWHA	people living with HIV/AIDS
PMTCT	prevention of mother-to-child transmission of HIV
TB	tuberculosis
TB/HIV	the intersecting epidemics of TB and HIV
TBPT	tuberculosis preventive therapy
UNAIDS	Joint United Nations Programme on HIV/AIDS
VCT	voluntary counselling and testing (for HIV)
WHO	World Health Organization

Field test version

This is the first version of the guide to monitoring and evaluation for collaborative TB/HIV activities. It has been written with input from those who have experience in implementing collaborative TB/HIV activities, experts in monitoring and evaluation from the fields of TB and HIV/AIDS, and TB and HIV control programme managers. Many of the indicators have not been tested in the programme setting or as part of a national monitoring and evaluation framework for collaborative TB/HIV activities. However, in response to the demand for standardized indicators for monitoring and evaluating collaborative TB/HIV activities this interim field guide has been published so that programmes undertaking collaborative TB/HIV activities can start to plan monitoring and evaluation.

The indicators in this guide will be formally piloted in several countries over the coming year. The experiences of these pilot countries and comments from a broader audience will be used to refine the guide and the indicators and a revised definitive guide will be published. This will include practical examples of how the indicators have been used by countries to improve programme performance and examples of the most useful data collection tools developed in the pilot countries.

We would value any comments you have on this guide or the indicators. We would also appreciate your experience of using them and how useful or otherwise they have been for improving programme performance.

Please send your comments to Alasdair Reid at reida@who.int

1. Introduction

The rapid growth of the human immunodeficiency virus (HIV) epidemic in many countries has resulted in an equally dramatic rise in the estimated number of new tuberculosis (TB) cases. HIV-related TB continues to increase even in countries with well-organized national TB control programmes (NTPs) that are successfully implementing the World Health Organization (WHO) DOTS strategy (the internationally recommended strategy for TB control). This suggests that, where HIV is fuelling the TB epidemic, full implementation of the DOTS strategy is insufficient to control TB and control of HIV infection must become an important concern for NTPs. The high morbidity and mortality from TB among people living with HIV/AIDS (PLWHA) makes TB case detection, treatment and prevention a priority for national AIDS control programmes (NACPs). TB and HIV infection co-exist in many people worldwide and HIV and TB programmes need to collaborate to relieve the resultant suffering.

Closer collaboration between HIV/AIDS programmes and TB programmes is needed to improve diagnostic, care and prevention services for people living with HIV and TB. The unprecedented scale of the epidemic of HIV-related TB demands urgent, effective and coordinated action. This does not require the development of an independent programme for TB/HIV but simply closer collaboration between existing TB and HIV programmes to exploit synergies, avoid overlap, and fill the gaps in service provision.

Collaborative TB/HIV activities aim to decrease the burden of disease in populations where HIV is fuelling the TB epidemic by expanding the scope of TB and HIV programmes and improving the quality of service provision. The resources being allocated for collaborative TB/HIV activities are increasing, with national scale-up of TB/HIV activities being implemented in several countries and innovative pilot projects in many more. As a result, there is a growing need to monitor these activities and evaluate their impact in order to inform future expansion of the most effective. A firm evidence base is needed on which to plan for and improve future collaborative TB/HIV activities. Programme managers are accountable to the population they serve and often to donors. They need to be able to demonstrate how their programmes are progressing towards their goals – and, if programmes are failing, to identify the reasons and develop solutions. Programmes, countries and donors also need to demonstrate progress towards the International Development Goals (see box).

Rationale for a guide to monitoring and evaluation for collaborative TB/HIV activities

Guides to monitoring and evaluation (M&E) and lists of indicators already exist for both TB programmes and HIV/AIDS programmes. However, a separate guide for collaborative TB/HIV activities is essential for several reasons. The extent of the joint epidemics and their impact requires effective, coordinated and well managed interventions. Collaborative TB/HIV activities are a new and developing area and must be shown to be effective to justify their becoming an integral part of national and international responses to the joint TB/HIV epidemics. M&E provides the means to assess quality, effectiveness, coverage and delivery of services and will promote a learning culture within programmes to ensure continual health improvement. The urgent need for action against TB/HIV means that results must be obtained quickly so that effective interventions can be scaled up and ineffective interventions withdrawn or adapted.

International Development Goals

Targets have been set by a number of international bodies to stimulate global action to reduce the heavy burden of infectious disease, including TB and HIV, in the developing world. These targets are collectively referred to as the International Development Goals.

In Okinawa in 2000, leaders of the G8 countries set a target of reducing TB deaths and TB prevalence by 50% by 2010.

Millennium Development Goals (MDGs): In 2000, the United Nations General Assembly accepted the goals and targets established in the Millennium Declaration. These targets embrace the WHO TB targets (70% case detection and 85% cure rate) and also propose to reduce TB prevalence and death rates by 50% of the year 2000 estimates by 2015. (Note the inconsistency with the Okinawa targets.) They also aimed to halt, and begin to reverse, the spread of HIV/AIDS by the year 2015.

United Nations General Assembly Special Session (UNGASS) on HIV/AIDS, Declaration of Commitment: In June 2001, UNGASS reaffirmed the Millennium Declaration and set quantified global targets:

- to reduce HIV prevalence by 25% among young men and women aged 15–24 in the most affected countries by 2005, and by 25% globally by the year 2010;
- to reduce the proportion of infants infected with HIV by 20% by 2005 and by 50% by the year 2010;
- by 2005, to ensure at least 90%, and by 2010 at least 95%, of young men and women aged 15–24 have access to youth-specific HIV/AIDS information, education and communication (IEC).

The **WHO Global Health Sector Strategy for HIV/AIDS**, endorsed by the World Health Assembly in 2003, has adopted these targets.

The **Three by Five ("3x5") Initiative**, launched by the Director-General of WHO at the United Nations in September 2003, aims to achieve at least three million PLWHA in resource-limited settings on antiretroviral therapy (ART) by 2005. This target arose from the Barcelona International AIDS conference and was developed further at the International Workshop on Strategies for Scaling-up HIV/AIDS Treatment in Resource-poor Settings, 9–11 July 2003, Amsterdam.

ISAC (intensified support and action countries) Initiative of Stop TB is a special emergency initiative to accelerate DOTS expansion and reach the 2005 targets, within the Global Plan to Stop TB, and ultimately to achieve the 2015 MDG of reversing TB incidence. ISAC will focus international assistance on and support efforts by the Stop TB Partnership in selected countries through the DOTS Expansion Working Group (DEWG), in order to reach, first, the 2005 targets and, subsequently, the MDGs.

M&E for collaborative TB/HIV activities requires the collection of data from two well established, disease-specific control programmes, and the tracking of data between the programmes and a range of other services and organizations. HIV programmes may be carrying out activities and collecting data of interest for TB programme management and vice versa: information has to flow between the programmes, services and organizations involved. The challenge for M&E of collaborative TB/HIV activities is to ensure that this flow of information and tracking of clients actually happens. Disparate M&E methodologies and conflicting demands for different information from external agencies will place an unnecessary burden on programmes – and M&E capacity is often weak in high-burden settings. Establishing indicators for an activity emphasizes to policy-makers and implementers the importance of that activity and may help to ensure that the activity occurs – "what gets measured gets done". TB and HIV programmes need to be accountable for the resources allocated to tackling the joint epidemics. If, through effective M&E, they can demonstrate a positive impact they are likely to attract additional resources.

Aim of this guide

This guide to M&E has been developed to assist in the management of TB and HIV/AIDS programmes that are implementing or planning to implement collaborative TB/HIV activities. It is intended to facilitate the collection of standardized data and help in the interpretation and dissemination of these data for programme improvement. It also aims to ensure consistency across all agencies and stakeholders involved in HIV/AIDS, TB and collaborative TB/HIV activities, avoiding wasteful duplication of effort in data collection by developing a core set of internationally accepted and standardized indicators for monitoring and evaluating programme performance. In addition, it is hoped that the data collected will provide further evidence of the benefits of collaborative TB/HIV activities. Data collection and reporting should be integrated into existing M&E systems wherever possible.

This guide does not intend to detail the information that is required by programmes to monitor progress towards DOTS expansion or HIV prevention, care and support, since this is well documented elsewhere. However, much of the information gathered for these two purposes will be of assistance in the overall M&E of collaborative TB/HIV activities. Where this is the case, specific reference is made to the data that should be collected and how they are helpful.

Target audience

This guide is intended for: policy-makers within ministries of health and other institutions that have an impact on health; HIV/AIDS and TB programme managers at all levels; national, regional and district TB/HIV coordinators or members of coordinating bodies; Staff of development and technical agencies, nongovernmental organizations (NGOs), civil society and community-based organizations (CBOs) involved in supporting collaborative TB/HIV activities.

2. Collaborative TB/HIV activities

What are the components of collaborative TB/HIV activities?

The TB/HIV Working Group of the Stop TB partnership has developed the *Strategic framework to decrease the burden of TB/HIV*[1] to establish what can be done to address the combined epidemics of TB and HIV. The *Guidelines for the implementation of collaborative TB and HIV programme activities* [2] define how these things could be done. The *Interim policy on collaborative TB/HIV activities* [3] advises on what should be done, under given circumstances in countries, to address TB/HIV. The third of these documents clearly defines collaborative TB/HIV activities, their goals and objectives (see Table 1).

The goal of collaborative TB/HIV activities is to decrease the burden of TB and HIV in populations affected by both diseases by expanding the scope of TB and HIV programmes and of their partners. The objectives underlying this goal are:

- to establish the mechanisms for collaboration between TB and HIV/AIDS programmes;
- to decrease the burden of TB in PLWHA;
- to decrease the burden of HIV in TB patients.

These objectives can be achieved only through effective implementation of the recommended DOTS strategy for TB control, enhanced HIV prevention and care, and the delivery of additional collaborative TB/HIV activities. These additional activities address the interface of the intersecting TB and HIV/AIDS epidemics and should be carried out as part of the health sector response to the dual TB and HIV epidemic. These collaborative activities will be more successful in the presence of effective implementation of national HIV/AIDS and TB control strategies that are based on international guidelines. The recommended activities can be implemented by TB and HIV/AIDS programmes, NGOs, CBOs or the private sector.

When should TB/HIV collaboration be undertaken?

Suggested thresholds for undertaking collaborative TB/HIV activities have been developed. These thresholds differentiate between countries on the basis of national or regional adult HIV prevalence and/or HIV prevalence among TB patients.[3]

Who are the beneficiaries of collaborative TB/HIV activities?

The main beneficiaries of collaborative TB/HIV activities will be communities that are experiencing a high or rising burden of TB as a result of a high or rising incidence of HIV.

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[1] *Strategic framework to decrease the burden of TB/HIV*. Geneva, World Health Organization, 2002 (WHO/CDS/TB/2002.296; WHO/HIV_AIDS/2002.2).
[2] *Guidelines for the implementation of collaborative TB and HIV programme activities.* Geneva, World Health Organization, 2003 (WHO/CDS/TB/2003.319; WHO/HIV/2003.1).
[3] *Interim policy on collaborative TB/HIV activities.* Geneva, World Health Organization, 2004 (WHO/HTM/TB/2004.330; WHO/HTM/HIV/2004.1).

Table 1. Recommended collaborative TB/HIV activities

A.	**To establish the mechanisms for collaboration**
A.1	A coordinating body for TB/HIV activities effective at all levels
A.2	Surveillance of HIV prevalence among TB patients
A.3	Joint TB/HIV planning
A.4	Monitoring and evaluation
B.	**To decrease the burden of TB in PLWHA**
B.1	Intensified TB case-finding
B.2	Treatment of latent TB infection (TB preventive therapy)
B.3	TB infection control in health care and congregate settings
C.	**To decrease the burden of HIV in TB patients**
C.1	HIV testing and counselling
C.2	HIV prevention methods
C.3	Co-trimoxazole preventive therapy
C.4	HIV/AIDS care and support
C.5	Antiretroviral therapy

Who should take the lead on collaborative TB/HIV activities?

Most interventions against TB will be the primary responsibility and under the governance of NTPs, and most of those against HIV will be the responsibility of HIV/AIDS programmes. However, especially in situations where HIV is fuelling the TB epidemic, TB/HIV programme collaboration seeks ways in which TB programmes can assist in HIV prevention and care and vice versa.

3. Brief overview of, and rationale for, monitoring and evaluation

M&E: what is it and why is it important?

M&E plays an important role in the management of health programmes, ensuring that the resources going into a programme are being utilized, services are being accessed, activities are occurring in a timely manner, and the expected results are being achieved. This management function facilitates the most effective and efficient use of human and financial resources for the achievement of maximum health benefit for the population served – which is especially relevant in areas where resources are limited.

Monitoring is the *routine* tracking of service and programme performance using input, process and outcome information collected on a regular and ongoing basis from policy guidelines, routine record-keeping, regular reporting and surveillance systems, and occasional health facility observations and client surveys. This information is used to assess the extent to which a policy or programme is achieving its intended activity targets on time. In a well-designed M&E system, monitoring will contribute greatly to evaluation.

Evaluation is the *episodic* assessment of results that can be attributed to programme activities; it uses monitoring data and often indicators that are not collected through routine information systems. Evaluation allows exploration of the causes of failure to achieve expected results on schedule and the mid-course corrections that might be necessary. **Process evaluation** assesses progress in programme implementation and coverage. **Outcome and impact evaluation** measure the effect of programme activities on the target population.

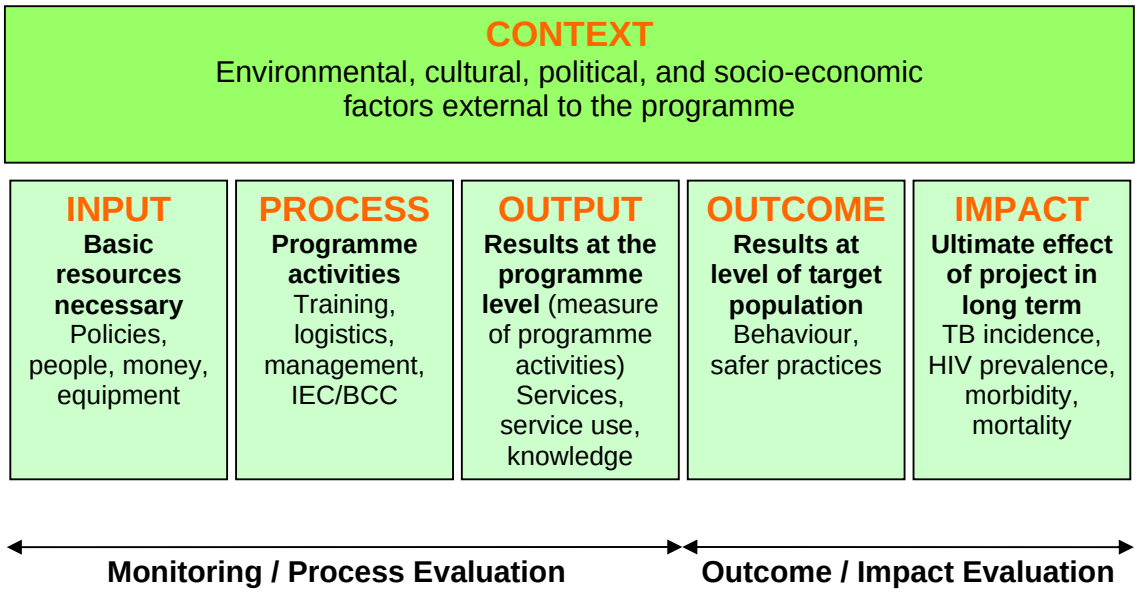
M&E is generally planned and performed by staff in the TB and HIV programmes or by general health service staff, but in some instances, particularly for a programme evaluation or review, external consultants or experts are brought in to help.

The monitoring and evaluation framework

The elements of M&E described above are brought together into a framework that forms the basis for a complete M&E plan. The framework is a visual concept of how the elements of the programme fit together. The most commonly used framework for the selection of indicators for M&E is the input–process–output–outcome–impact framework illustrated in Figure 1.

For a programme or project to achieve its goals, **inputs,** such as money, staff time and policies, must result in **outputs,** such as drug stocks and supply systems, new or improved services, trained staff. These outputs are often the result of specific **processes**, such as training sessions for staff, that are key activities aimed at achieving the outputs. If these outputs are well designed and reach the populations for which they were intended, the programme or project is likely to have positive short-term effects or **outcomes**, such as an increased number of PLWHA screened for TB symptoms or of TB patients tested for HIV. These positive short-term outcomes should lead to changes in the longer-term **impact** of programmes, reflected in fewer new cases of TB or HIV (see glossary for detailed definitions).

Figure 1. Monitoring and evaluation framework



Together, monitoring and evaluation demonstrate the impact of programme effort and resources on achieving programme goals. They provide managers and decision-makers at all levels with the relevant information for action, i.e. policy formulation, priority setting, strategic planning, design and implementation of programmes and projects, and the allocation or reallocation of resources. An abundance of information of varying quality is often available from M&E. Information must be carefully selected for direct relevance to the task at hand and must be analysed and presented in an accessible, comprehensible, consistent and coherent form that is appropriate for each audience, e.g. policy-makers, the general public. Broad dissemination of appropriate M&E results can foster a culture of transparency and accountability, as well as promote a learning culture with dissemination and replication of best practice. This is particularly relevant to a new strategy of which experience is limited.

Steps in developing an M&E plan

1. Identifying goals and objectives of the programme
2. Developing an M&E framework
3. Defining and selecting relevant indicators
4. Identifying sources and methods of data collection
5. Developing an M&E implementation plan
6. Dissemination and utilization of the results

The independent M&E systems that exist for TB and HIV programmes may not adequately capture the programme effort expended on collaborative TB/HIV activities or may result in duplication of effort, conflicting data collection requirements, and difficulties in evaluating the performance of collaborative activities as a whole. Consensus is needed between TB and HIV programmes on data requirements, indicator definitions and allocation of responsibility to ensure effective M&E of collaborative TB/HIV activities. A core group of simple indicators, including those to trigger actions, is essential for the programmes to work effectively together.

Indicators

An indicator is a variable used to measure progress towards the stated goals, objectives and targets of the programme, allowing managers to assess progress towards benchmarks. It is a specific measure of programme performance that is tracked over time by the monitoring system. The value of an indicator in itself is usually of limited use but rather unexpected values or changes in the indicator suggest the need for further investigation.

Indicators are usually selected and targets set during the process of programme planning. The choice of indicators will also depend on what services are being offered and the capacity of programmes to carry out M&E. Table 2 lists standard selection criteria for judging the relevance of specific indicators.

Table 2. Criteria for indicator selection [a]

Valid	Indicators should measure the condition or event they are intended to measure.
Reliable	Indicators should be objective and produce the same results when used more than once to measure the same condition or event, all things being equal (for example, using the same methods/tools/instruments).
Specific	Indicators should measure only the condition or event they are intended to measure.
Sensitive	Indicators should reflect changes in the state of the condition or event under observation.
Operational	Indicators should be measured with definitions that are developed and tested at the programme level and reference standards.
Affordable	The costs of measuring the indicators should be reasonable.
Feasible	It should be possible to carry out the proposed data collection under normal programme conditions
Measurable	Indicator can be objectively measured
Comparable	Indicators should be comparable over time and across different geographical sites

[a] Adapted from *Development of health programme evaluation: report by the Director-General*. Geneva, World Health Organization, 1978 (document A31/10).

Characteristics of a good monitoring and evaluation system

Within a programme or project, the M&E system is structured to ensure the most efficient use of resources to generate the data needed for decision-making. It guides data collection and analysis to increase consistency and enable managers to track trends over time. It should serve many different constituencies, including programme managers, donors, and government planners, but at the same time bring the various interests together into one system to avoid duplication of effort. A good M&E system should serve as a catalyst to coordination between all the different partners involved in the programme – and ideally between different programmes.

The M&E system should include dedicated individuals at central level who coordinate M&E for health and should be tailored to national capacity to carry out M&E (although it is recommended that 10% of programme budget be spent on M&E). It should be based on a strategy that includes clear goals and targets and guidelines for the implementation of activities, and should include specific indicators to measure programme progress. The system should also include plans for data collection, analysis, dissemination and use of results for programme improvement. Table 3 summarizes the key elements of a good M&E system.

Table 3. Checklist of features of a good M&E system [a]

M&E unit

- Dedicated personnel overseeing health service M&E nationally
- A budget for M&E (10% of total programme budget)
- Formalized link with partners: research institutions; leading NGOs, donors and CBOs involved in TB/HIV; private sector; other relevant sectors
- Data processing and statistical expertise in the M&E unit or affiliated unit
- Data dissemination expertise in the M&E unit or affiliated unit
- Local M&E human resource capacity developed and maintained
- Regular independent review of programme

Clear goals

- Well-defined national programme aims, objectives, activities and targets
- Regular evaluation of progress in implementing national M&E plans
- Guidance to districts and regions or provinces for M&E
- Guidelines for linking M&E to the private and other sectors
- Coordination of national and donor M&E needs

Indicators

- A set of priority core indicators for different levels of M&E
- Indicators that are comparable over time
- Indicators that are comparable between geographical areas within a country and between countries

Data collection and analysis

- A national-level data collection and analysis plan
- A logical flow of data from service delivery to national level
- A plan to collect data and analyse indicators at different levels of M&E

Data dissemination and use of results

- A national-level data dissemination plan with clear guidance on how information can be used for programme improvement at all levels.
- A well disseminated and informative annual M&E report
- Annual meetings to disseminate and discuss M&E and research findings with policy-makers and planners
- A centralized database or library of all TB- and HIV-related data collection, including ongoing research
- Coordination of national and donor M&E dissemination needs

[a] Adapted from: *National AIDS programme: a guide to monitoring and evaluation*. Geneva, Joint United Nations Programme on HIV/AIDS, 2000 (UNAIDS/00.17E).

4. Country profile

Certain important data should be collated in the form of a country profile that will provide the background context for the monitoring and evaluation of collaborative TB/HIV activities. These include environmental, cultural, political, and socio-economic factors, often captured as a periodic narrative, which may also help to explain changes in indicator values and assist in their interpretation. As well as these broader factors, other data that are useful for providing context to overall M&E include total population, number of health facilities, and burden of TB and HIV disease. These data are likely to be collected routinely and to be available from other sources, and therefore no detail is given on collection methods.

An initial situational analysis should be performed to collate a baseline record of the activities and services already in place and of where there are gaps that can be used for advocacy, resource mobilization and planning purposes, and to ensure that activities can be provided on the basis of local needs and capacity. The information may be collated nationally but for planning should be available down to the level of the basic administrative unit (district or equivalent). These data should be collected regularly as a component of programme M&E giving some indication of the progress towards national coverage of services for people with TB and/or HIV and the impact that programme activities are having on disease burden. Examples of the data that should be collected in a situational analysis to produce a country profile are given below.

Population and services

Total population

Total population at all administrative levels (national, provincial, regional, district and sub-district, or equivalents), including total adult population (15–49 years) and young adult population (15–24 years), to be used as denominators for the time period under evaluation.

Number of administrative units (regions, provinces, districts and sub-districts)

Total number of:

a. health districts (or equivalent basic administrative/operational units) in the country;
b. health regions (or equivalent second-level administrative/operational units) in the country;
c. health provinces (or equivalent third-level administrative/operational units) in the country.

Number of health facilities

Total number of health facilities in the country by category, e.g. public, private, tertiary hospitals, secondary referral hospitals, district general hospitals, primary health care clinics, health posts, TB diagnostic and treatment centres, HIV counselling and testing centres, HIV care and support service providers.

Staffing levels at each health facility

For each of the above facilities it is useful to know the number of staff by category and grade. If possible, this should be reported by number of posts allocated to each facility and the number that are actually filled.

Geographical coverage of collaborative TB/HIV activities

It is important to understand what proportion of any given population can access the services they need, e.g. proportion of all PLWHA with access to co-trimoxazole. Coverage can be defined as the percentage of the population needing a service that actually has access to the service. Access may depend on many factors, such as the proximity of the nearest service point, timing of service availability, cost of the service, and eligibility criteria that may be established by national guidelines or service providers. Practically, measuring coverage in terms of service utilization is often better, i.e. the percentage of the population in need that actually uses the service. However, this can often be difficult to measure accurately, because of difficulties in determining the denominator. In the early stages of establishing a nationwide service, a simple easy to measure proxy for service coverage is service availability, i.e. the proportion of districts where a given service is available. This gives no indication of whether the service is actually being used or whether access is equitable or the service is of high quality – but it is cheap and simple to measure.

The following activities are further defined in the *Interim policy on collaborative TB/HIV activities*.[1]

- *Activities to decrease the burden of TB in PLWHA*

  Total number of districts (or equivalent) where the following activities are being fully implemented (i.e. implemented in every public sector health facility throughout the district):
  a. intensified TB case-finding for those found to be HIV-positive at VCT (voluntary counselling and testing
  b. intensified TB case-finding for all PLWHA at routine health checks, at least annually
  c. intensified TB case-finding for all PLWHA at every contact with the health service
  d. a formal referral mechanism between HIV diagnostic and care services and TB services for PLWHA who have symptoms of TB
  e. isoniazid preventive therapy (IPT) for PLWHA who have latent TB infection
  f. TB infection control for PLWHA in health care and congregate settings (e.g. hospitals, clinics, prisons, military barracks).

- *Availability of HIV testing and counselling at TB diagnosis and treatment centres*

  Number of TB diagnosis and treatment centres with quality-assured HIV testing and counselling available for TB patients by the following categories, as a proportion of total number of TB diagnosis and treatment centres/clinics:
  a. HIV testing and counselling available within the TB clinic
  b. HIV testing and counselling not available within the TB clinic but availableon the same site

[1] *Interim policy on collaborative TB/HIV activities.* Geneva, World Health Organization, 2004 (WHO/HTM/TB/2004.330; WHO/HTM/HIV/2004.1).

c. HIV testing and counselling not available within the TB clinic but available at another site
d. HIV testing and counselling not available to TB patients
e. total number of TB diagnosis and treatment centres providing HIV testing and counselling (a+b+c) divided by total number of TB diagnosis and treatment centres.

- *Activities to decrease the burden of HIV/AIDS in TB patients*

  Total number of districts (or equivalent) in your country where the following activities are being fully implemented:
  a. routine HIV testing and counselling for all TB patients
  b. promotion and provision of HIV prevention (condoms and education) for TB patients
  c. co-trimoxazole preventive therapy (CPT) for HIV-positive patients during TB treatment,
  d. ART for eligible HIV-positive TB patients
  e. if not available on site, a referral mechanism HIV-positive TB patients who need HIV care and support.

- *Services for those attending for HIV testing and counselling or HIV care and support*

  Number of HIV testing and counselling services or HIV care and support services providing each of the services indicated below, as a proportion of total number of HIV testing and counselling services or HIV care and support services:
  a. intensified TB case-finding (among all attendees or only among those found to be HIV-positive)
  b. screening for sexually transmitted infections (all attendees or only those found to be HIV-positive)
  c. IPT for HIV-positive people, if no evidence of active TB on screening
  d. prevention of mother-to-child transmission of HIV (PMTCT) services for HIV-positive pregnant women
  e. HIV care clinic
  f. ART
  g. PLWHA support group.

- *Complete package of collaborative TB/HIV activities*

  Total number of districts adopting a complete package of collaborative TB/HIV activities as detailed in the *Interim policy on collaborative TB/HIV activities* and defined in the national TB/HIV policy, as a proportion of total number of districts (or equivalent). (See Table 1, Recommended collaborative TB/HIV activities, page 10.)

Survey of TB and HIV/AIDS stakeholders

A list of providers/stakeholders/partners involved in providing TB and/or HIV services in each district,[1] including an assessment of the services offered, target population or catchment area, numbers of clients using each service, client profile (age, sex, risk categories), HIV status of clients if known. This will provide information on who is doing what and where and

[1] Guidance on carrying out a survey of stakeholders is given in section 4.1.3 of *Guidelines for implementing collaborative TB and HIV programme activities.* Geneva, World Health Organization, 2003 (WHO/CDS/TB/2003.319; WHO/HIV/2003.01).

allow identification of gaps and underserved populations. This list of stakeholders can be used to inform indicator D.2.1 (see section 5).

Surveillance systems

- *System for HIV surveillance in TB patients*

  Is there a system that complies with international standards for monitoring the prevalence of HIV among TB patients?[1] If so, describe the system, detailing the frequency of reporting and the estimated coverage of the surveillance system.

- *System for monitoring the incidence of TB among PLWHA*

  Is there a system for monitoring the notification of TB among cohorts of PLWHA? If so, describe the system and detail the frequency of reporting.

- *System for linkage between HIV and TB reporting databases*

  Is there a system for identifying cases that are reported to both TB and HIV reporting systems? If so, describe the system and detail the frequency of reporting.

Disease-specific information

A clear indication of the burden of TB and HIV disease in the population is important for planning services and for monitoring the impact of programmes. The Millennium Development Goals (MDGs), approved by the United Nations, have associated indicators[2]. Resources will be available to ensure that these data are available on a regular basis in all high-burden settings. Where possible, the MDG indicators should be included in the overall M&E of collaborative TB/HIV activities.

Burden of HIV

HIV seroprevalence data should be available in most countries from the NACP. Representative national estimates should be obtained – and should be broken down and reported by the smallest administrative unit possible. In high-prevalence settings, HIV prevalence should be reported in the general population, by age group and by risk group (antenatal clinic attendees, intravenous drug users, VCT attendees, blood donors, military recruits, prisoners, men who have sex with men, commercial sex workers). In countries with focal epidemics, HIV prevalence should be reported in detail only in the relevant at-risk populations and for all administrative areas within the country with a generalized HIV epidemic (adult HIV seroprevalence >1%).

The relevant MDG indicator is MDG Health Indicator 18 – prevalence of HIV infection among young people aged 15–24 years or at-risk populations, reported separately for urban and non-urban populations. These data are required to monitor MDG 6 (to combat HIV/AIDS.

[1] Further detail on HIV surveillance in TB patients can be found in the *Guidelines for HIV surveillance among tuberculosis patients*. Second edition. Geneva, World Health Organization, 2004 (WHO/HTM/TB/2004.339; WHO/HIV/2004.06; UNAIDS/04.30E).

[2] Further information on the Millennium Development Goals can be found at http://www.un.org/millenniumgoals/ and http://www.developmentgoals.org/

malaria and other diseases), Target 7 (to have halted, and begun to reverse, the spread of HIV/AIDS by 2015), and correspond to MDG Health Indicator 18. They will give an indication of the scale and distribution of the HIV epidemic at the outset of activities. If monitored regularly over time this indicator will indicate the trend in HIV burden in the at-risk population and may help in evaluating the likely impact of collaborative TB/HIV activities.

Burden of tuberculosis

Comprehensive data on the true prevalence or incidence of TB in a given population are seldom available. However, most NTPs will collect detailed information on all registered TB cases. WHO also estimates country incidence of TB, thus allowing analysis of the proportion of existing TB cases that are actually detected and registered, i.e. the case detection rate. These rates are published for each country in the annual WHO *Global Tuberculosis Report*.

DOTS coverage

DOTS is the internationally accepted strategy for TB control. It is important to know what proportion of TB is managed under DOTS, and what proportion of basic health administrative units (e.g. districts) are considered DOTS districts.

The relevant MDG indicator is MDG Health Indicator 24 – proportion of TB cases detected and proportion cured, under DOTS.

TB case management and outcome

Data on TB case management in a country should be available from routine NTP monitoring. They will include information on the number of TB suspects investigated, number diagnosed with TB (new/relapse, smear-positive, smear-negative and extrapulmonary), and TB case management details, including case notification rates and treatment outcomes (completed, cured, interrupted, died, transferred, failed). This is also a requirement for monitoring progress towards the MDGs.

MDG 6 (to combat HIV/AIDS. malaria and other diseases), Target 8 (to have halted by 2015, and begun to reverse the incidence of malaria and other major diseases), requires a measure of prevalence and death rates associated with TB. Without community surveys, however, it is not possible to know the true prevalence and death rate from TB because some cases never present to services. Proxy indicators – case-fatality rates and case notification rates – are therefore used. Thus the relevant MDG indicators are MDG Health Indicators 23a – TB case-fatality rate per 100 000 (district, regional and/or national if available) – and 23b – TB case notification rate per 100 000 (district, regional and/or national if available). These are available from routine TB programme monitoring.

5. Indicators for collaborative TB/HIV activities

This section gives a range of possible indicators for use in M&E of collaborative TB/HIV activities. They are grouped by objective and activity area as defined in the WHO *Interim policy on collaborative TB/HIV activities.*[1]

Fields for each indicator

- ***Indicator title***
- ***Definition*** – The definition of the indicator, including definition of numerator and denominator, and proposed calculations where necessary.
- ***Purpose*** – The reason for collecting the information, what the indicator attempts to measure.
- ***Methodology*** – The suggested methodology for collecting each indicator and the level at which it should be measured (e.g. community, district, provincial or national).
- ***Periodicity*** – The recommended frequency with which the indicator should be measured.
- ***Strengths and limitations*** – Outline main strengths and limitations of indicator.
- ***Importance*** – Whether the indicator is considered core, desirable or optional for monitoring or evaluation.
- ***Responsibility*** – Suggests who should be responsible for ensuring the quality of data collection, analysis and dissemination.
- ***Measurement tool*** – what is needed to collect the indicator.

Objective A

Establish the mechanisms for collaboration between TB and HIV programmes

A.	**To establish the mechanisms for collaboration**
A.1	A coordinating body for TB/HIV activities effective at all levels
A.2	Surveillance of HIV prevalence among TB patients
A.3	Joint TB/HIV planning
A.4	Monitoring and evaluation

[1] *Interim Policy on Collaborative TB/HIV Activities*. Geneva, World Health Organization, 2004 (WHO/HTM/TB/2004.330; WHO/HTM/HIV/2004.1).

A.1 Establishment of a TB/HIV coordinating body

Indicator A.1.1 **Existence of a coordinating body for TB/HIV activities effective at all levels**	
Definition	The existence of a TB/HIV coordinating body or mechanism effective at all administrative levels of the health service, with representation from the major stakeholders in collaborative TB/HIV activities, which meets at least quarterly.
Purpose	To determine the level of political commitment to, and presence of a forum for, overall coordination of collaborative TB/HIV activities.
Methodology	Simple yes/no answer to the following questions: 1. Is there a body or mechanism for coordinating collaborative TB/HIV activities at national level? 2. Does the national body or mechanism have representation from all major stakeholders in TB and HIV control?[1] 3. Does it meet at least quarterly with minutes that are circulated? 4. Is a similar coordinating body or mechanism also effective at sub-national levels (e.g. regional, district or equivalent) where both TB and HIV are prevalent? A positive response to all questions is required.
Periodicity	Annually if there are any negative answers; every 2–3 years if the answer to all questions is yes.
Strengths and Limitations	National coordination is essential to reach policy consensus, develop joint strategic plans, mobilize resources, build capacity, and implement and monitor collaborative TB/HIV activities. All countries should have a mechanism or body that can coordinate the activities of the TB and HIV/AIDS programmes. The absence of a coordinating mechanism suggests a lack of commitment to TB/HIV collaboration and that national implementation of collaborative TB/HIV activities is less likely to succeed. However, this indicator gives no indication of the effectiveness of the coordinating body or mechanism and, alone, does not guarantee effective implementation of collaborative TB/HIV activities.
Importance	Desirable; core for evaluation.
Responsibility	Ministry of health evaluation by those external to the TB and HIV control programmes. External evaluation or independent review team.
Measurement tools	Interview of key programme personnel and stakeholders in TB and HIV, policy analysis and review of minutes or documents from the meetings of the coordinating body or mechanism.

[1] Membership should be drawn from each programme and include representatives from urban and rural district health management teams, community, TB patient and PLWHA representatives, and NGOs/CBOs working in TB or HIV/AIDS, as defined in *Guidelines for implementing collaborative TB and HIV programme activities*, Geneva, World Health Organization, 2003 (WHO/CDS/TB/2003.319; WHO/HIV/2003.01).

A.2 Surveillance of HIV prevalence among TB patients

Indicator A.1.2 **HIV seroprevalence among all TB patients**	
Definition	Number of all newly registered TB patients who are HIV-positive, expressed as a proportion of all newly registered TB patients.
Numerator	Total number of newly registered TB patients (registered over a given period of time) who are HIV-positive.
Denominator	Total number of newly registered TB patients (registered over the same given time period) who were tested for HIV and included in the surveillance system.
Purpose	Surveillance of HIV prevalence among TB patients will give information about the epidemics of both TB and HIV. In particular, it gives an indication of the degree of overlap in the epidemics in any given setting and, when compared with HIV prevalence in the general population, an indication of the contribution that HIV is making to the TB epidemic.
Methodology[1]	Selecting the appropriate strategy for HIV surveillance among TB patients will depend mainly on the existing surveillance system and the underlying HIV epidemic state in a country. There are three main methods for surveillance of HIV among TB patients: • *Routine HIV testing* data can form the basis of a reliable surveillance system at all levels of HIV epidemic (low-level, concentrated, generalized[2]), provided that high coverage is achieved (more than 80% of all TB patients giving consent and being tested). These routine data can be calibrated by periodic (special) or sentinel surveys. • *Sentinel surveillance* collects information in a regular and consistent way from a predetermined number of persons from specific sites and population groups that are of particular interest or are representative of a larger population. The difficulty with sentinel surveillance is in determining how representative the sampled population is of the population from which they are taken and also how representative they are of the general population of TB patients. Sentinel surveillance systems are usually based on unlinked anonymous testing methods, often using blood specimens that have been collected for other purposes and stripped of all identifying markers. • *Periodic special surveys* have a specific role where the prevalence of HIV among TB patients has not been previously estimated and are an essential part of the initial assessment of the situation. Surveys using representative sampling methods and appropriate sample sizes can provide accurate estimates of the burden of HIV in TB patients. This information may alert TB programmes to a potential HIV problem and enable action to be taken, which may include the institution of more systematic surveillance. Ideally surveillance of HIV prevalence should include all newly registered TB patients, diagnosed according to international standards.[3] However, if periodic special surveys or sentinel methods are used and resources are limited, countries may choose to include only adult smear-positive pulmonary patients, i.e. those with a definitive diagnosis of TB.

[1] Further detail on HIV surveillance in TB patients can be found in the *Guidelines for HIV surveillance among tuberculosis patients*. Second edition. Geneva, World Health Organization, 2004 (WHO/HTM/TB/2004.339; WHO/HIV/2004.06; UNAIDS/04.30E).

[2] Classified according to WHO definitions: *Low-level HIV epidemic:* HIV prevalence has not consistently exceeded 5% in any defined sub-population at risk of HIV. *Concentrated:* HIV prevalence consistently >5% in at least one defined sub-population but <1% in pregnant women in urban areas *Generalized:* HIV prevalence consistently >1% in pregnant women in urban areas. S*econd generation surveillance for HIV.* Geneva, World Health Organization and the Joint United Nations Programme on HIV/AIDS, 2000 (WHO/CDS/CSR/EDC/2000.5; UNAIDS/00.03E).

[3] *Treatment of tuberculosis: guidelines for national programmes*. Geneva, World Health Organization, 2003 (WHO/CDS/TB 2003.313).

	Countries with scarce resources and an HIV epidemic state that is either low or concentrated may also choose to include only a smaller subgroup of TB patients, e.g. adults aged 15–59 years. Unless relapse cases are identified as such and the results analysed separately, they should be excluded from surveillance systems because of the risk of surveying the same patient twice. However, relapse cases may be included and need not be identified as such if surveillance is based on survey methods and these surveys are undertaken over a short period of time, ideally less than 2–3 months. All countries with a *generalized HIV epidemic state* should aim to ensure that HIV counselling and testing are offered and actively promoted to all TB patients, in conjunction with ART where possible. The HIV results from this routine testing of TB patients should be used as the basis for surveillance, if >80% of TB patients are tested. These data from routine testing can be calibrated by periodic special or sentinel surveys. In the absence of universal access to HIV testing and counselling for all TB patients, special surveys or sentinel surveys are suitable alternatives. In countries with a *concentrated epidemic state*, HIV counselling and testing for all TB patients should form the basis for the surveillance. If this system is not yet in place, periodic (special) surveys or sentinel surveys are suitable alternatives. In countries with a *low-level HIV epidemic state* where HIV testing is not routinely offered to TB patients, special surveys or sentinel surveys can be conducted at intervals of 2–3 years. At present there is insufficient evidence to recommend the use of sputum testing as a valid alternative to serological tests for HIV surveillance.
Periodicity	In the absence of a national recording and reporting system where data are continuously collected and reported quarterly, data should be collected every 2–3 years. In countries where HIV prevalence in TB patients is low (<5%) and where the HIV epidemic state and TB burden in the general population are stable and low, periodic surveys may be repeated at 5-yearly intervals. In resource-poor countries, where the HIV and TB burden in the general population may be concentrated or generalized but the use of more systematic methods of surveillance is not possible, special surveys should be undertaken at least every 3–5 years.
Strengths and Limitations	Measuring HIV seroprevalence among TB patients can inform the targeting of resources, the planning of prevention, care and support for people with HIV and TB, and monitoring the effectiveness of these activities over time. It can raise awareness among policy-makers and health care workers about HIV-related TB and the need for a collaborative approach to the problem. It is also helpful to corroborate surveillance data on HIV prevalence in the general population obtained from other sources. In low HIV epidemic states it will provide an early indication of changes in the HIV epidemic, alerting policy-makers to the need for joint strategies. In concentrated or generalized HIV epidemics it will help in assessing the impact of HIV upon TB and monitor the effectiveness of joint strategies to reduce the burden of HIV and TB. Even if more than 80% of patients are tested, using routine programme data from TB patients tested as part of their care carries the risk of bias if those who are tested are very different from those who are not tested. The use of unlinked anonymous surveys to derive HIV prevalence data is increasingly criticized because of the advantages to patients of knowing their status and the ethics of carrying out HIV testing in patients not offered VCT.
Importance	Core
Responsibility	NACP and NTP
Measurement tools	Routine data from HIV counselling and testing of TB patients collected continuously in a modified TB register or separate TB/HIV register, sentinel surveillance or special surveys.

A.3 Joint TB/HIV planning

Indicator A.3.1 **Joint TB/HIV planning**	
Definition	Existence of joint planning at national level for collaborative TB/HIV activities between the NTP and NACP
Numerator	To demonstrate commitment at national level to ensuring collaboration between TB and HIV programmes through joint planning
Methodology	A content analysis of the national joint TB/HIV plan and budget endorsed by both NTP and NACP should be conducted and matched against the checklist of key components. In the absence of a joint TB/HIV plan, a content analysis of both the national TB control and national HIV/AIDS control plans should be carried out to identify evidence of each of the following key components: • Clear definition of the roles and responsibilities of the NTP and NACP for implementation of each collaborative TB/HIV activity. • Joint resource mobilization for collaborative TB/HIV activities (joint budget if resources are adequate or joint proposal to solicit additional resources). • Joint human resource capacity development strategy to ensure adequate staff to deliver collaborative TB/HIV activities, including attention to recruitment and retention, training, accreditation, and ongoing supervision and support of staff. • Joint pre-service and in-service training on TB and HIV for all health care workers. • Joint communication and advocacy strategy for TB and HIV programmes (HIV messages include TB and vice versa). • Joint plan for involving communities in implementation of collaborative TB/HIV activities, ensuring that community TB programme supporters include HIV/AIDS prevention, care and support activities in their remit and vice versa. • Joint plan for operational research in collaborative TB/HIV activities. • Joint approach to M&E of collaborative TB/HIV activities. For completeness, all components should be reflected in a joint plan. In the absence of a joint TB/HIV plan there must be evidence that each of the key components of joint planning is stated in both the NTP plan and the NACP plan. In larger countries it may be appropriate to adapt and report this indicator at sub-national level.
Periodicity	Annually
Strengths and Limitations	This indicator aims to demonstrate that NTPs and NACPs are using the most important opportunities for collaborative planning. To ensure a rational, comprehensive and effective approach to collaborative working, NTPs and NACPs should either devise a joint TB/HIV plan, or introduce TB/HIV components in both the national TB control plan and national HIV/AIDS control plan. However, assessing evidence of political or programme commitment to collaborative TB/HIV activities can be subjective. Introduction of a list of key components that need to be included to demonstrate complete joint planning attempts to reduce subjectivity and may help to identify trends over time and enable comparison between countries. The presence of all key components for joint planning indicates that there is at least a policy of comprehensive planning between TB and HIV programmes for collaborative TB/HIV activities. Statement of collaboration in a policy is no guarantee that it occurs or that the collaboration is effective. An incomplete plan suggests that there is room for better joint planning but may also reflect situation specific restrictions.
Importance	Desirable, core for evaluation
Responsibility	External evaluation team or ministry of health team external to NTP and NACP
Measurement tools	Analysis of annual TB, HIV and TB/HIV plans using checklist above.

Indicator A.3.2 **Presence of joint TB/HIV IEC materials in TB and HIV services**	
Definition	Number of TB and HIV service delivery points where IEC materials giving information on both HIV and TB, their interaction and their prevention are available, expressed as a proportion of all TB and HIV service delivery points
Numerator	Total number of TB and HIV service delivery points where IEC materials on both HIV and TB, their interaction and their prevention are available
Denominator	Total number of TB and HIV service delivery points evaluated.* *Also give the total number of TB and HIV service delivery points nationally to indicate the proportion evaluated.
Purpose	To demonstrate the commitment and capacity at national and facility level to creating HIV awareness among people with TB and TB awareness among PLWHA and to promote prevention of HIV and TB.
Methodology	The data needed for this indicator can be collected at the time of regular facility supervisory visits or at the time of external programme review. Ideally, data on this indicator should be collected on all supervisory visits made by the district TB manager, HIV manager or TB/HIV manager and thus be available for all TB and HIV service delivery points. This indicator requires the supervisor or reviewer to determine whether any IEC materials (e.g. posters, leaflets or videos) are freely available for clients. At a minimum IEC materials should provide information on TB, HIV and their interaction and on how to reduce the risk of both HIV transmission and TB disease. They should be available in local languages and understandable by those who are illiterate.
Periodicity	Collected annually from each facility at the time of supervisory visits and/or external review of TB/HIV activities or TB and HIV/AIDS programme reviews.
Strengths and Limitations	The presence of comprehensive and linked IEC materials is an important step in ensuring community awareness about HIV, TB, the link between them, and the prevention, treatment and care opportunities that are available. The indicator will not provide information on the quality or appropriateness of IEC materials, or whether they are used or understood, or on the training received by health care workers in routinely discussing HIV and TB with all clients. Information on HIV risk reduction is a simple, cheap and effective tool for reducing HIV transmission and should be made available to those at risk of HIV infection, including TB patients, especially in settings where the HIV epidemic is driving the TB epidemic. The absence of IEC materials related to HIV in TB services and to TB in HIV services can be the consequence of failure to produce the materials, failure to distribute the materials to the facility level, lack of collaboration between control programmes (HIV-related IEC materials not distributed to TB services), lack of commitment to HIV awareness at the NTP (and vice versa), IEC material on the TB/HIV link is not produced nationally or is insufficiently distributed, or lack of commitment to TB/HIV control at the facility level (distributed materials are not used). Additional investigation will be necessary to find out which step is operating poorly.
Importance	Optional, core for evaluation.
Responsibility	NTP/NACP/review team.
Measurement tools	Facility review checklist.

A.4 Monitoring and evaluation of collaborative TB/HIV activities

Indicator A.4.1 **Monitoring and evaluation of collaborative TB/HIV activities**	
Definition	Presence of an integrated national M&E system for collaborative TB/HIV activities that informs annual NTP and NACP planning cycles and their mid-term (3–5-year) plans.
Purpose	This indicator aims to confirm that the information generated by the national M&E system is used to improve programme performance by feeding in to the short- and long-term planning processes of the TB and HIV/AIDS programmes
Methodology	Two-part question with simple yes/no answer. A. *Routine monitoring:* Evidence (gathered from annual TB, HIV and TB/HIV plans and interviews with key TB and HIV programme staff) that the annual TB/HIV monitoring report informs the annual planning process of the TB and HIV programmes. B. *Evaluation:* Evidence (gathered from annual TB, HIV and TB/HIV plans and interviews with key TB and HIV programme staff) that the report from the detailed mid-term evaluation of collaborative TB/HIV activities informs the mid-term planning process of both TB and HIV programmes
Periodicity	A. Annually for monitoring B. Every 3–5 years for evaluation
Strengths and Limitations	The information generated through programme M&E should be used to critically evaluate programme performance and improve service provision. For this to happen, reports from M&E should inform the annual and mid-term planning processes. However, this indicator will give information only on whether there is a system to ensure that the data arising from the M&E process are fed into the planning processes; it gives no indication of the quality of these data or whether they are used appropriately to improve programme performance.
Importance	Desirable, core for evaluation
Responsibility	External evaluation
Measurement tools	Analysis of annual TB, HIV and TB/HIV plans and interview of key TB and HIV programme staff

Objective B

Decrease the burden of TB in people living with HIV/AIDS

B.	**To decrease the burden of TB in PLWHA**
B.1	Intensified TB case-finding
B.2	Treatment of latent TB infection (TB preventive therapy)
B.3	TB infection control in health care and congregate settings

B.1 Intensified case-finding

Indicator B.1.1 **Intensified TB case-finding among PLWHA**	
Definition	Number of PLWHA, attending for HIV testing and counselling or HIV treatment and care services, who were screened for TB symptoms, expressed as a proportion of all PLWHA attending for HIV testing and counselling or HIV treatment and care services
Numerator	Number of PLWHA attending for HIV testing and counselling or HIV treatment and care services who were screened for TB symptoms, over a given time period
Denominator	Total number of PLWHA attending for HIV testing and counselling or HIV treatment and care services, over the same given time period
Purpose	This is a process indicator for an activity intended to reduce the impact of TB among PLWHA. It will demonstrate the level of implementation of the recommendation that PLWHA are screened for TB at diagnosis and at all follow-up visits.
Methodology	Data should be collected routinely at all HIV testing and counselling facilities (e.g. VCT centres, PMTCT providers, medical inpatient wards, private sector) and any situation where regular HIV care and support are provided (e.g. ART clinics, HIV care clinics, PWLHA support groups). A suggested method of conducting the screening would be to ask HIV-positive clients whether they are currently on TB treatment. If not, they would then be asked about the key symptoms of TB disease (e.g. cough, fever, night sweats, recent weight loss, lymphadenopathy). A simple checklist could be used and any positive response would indicate that the individual should be managed as a TB suspect. TB control programme protocols should define the criteria for identifying a TB suspect. TB suspects should not be given treatment of latent TB infection and should be investigated for TB (or referred to TB service for investigation). This can be reported as a total or separately by facility type for each situation in which HIV care and support are provided or HIV counselling and testing are conducted, e.g. number of HIV-positive clients newly diagnosed at VCT centre or number of HIV-positive clients who attend for annual check-up who are screened for TB symptoms.
Periodicity	Collected continuously and reported and analysed quarterly.
Strengths and Limitations	There are two reasons for carrying out TB screening among PLWHA. Firstly, incidence of TB is greatly increased in PLWHA and identification of those with symptoms of TB is the first step in active case-finding. Early identification of TB suspects with signs and symptoms of TB, followed by prompt referral for diagnosis and treatment, increases the chances of survival, improves quality of life and reduces transmission of TB in the community. Secondly, TB symptom screening can also form the basis for identifying HIV-positive clients who show no evidence of active TB and would benefit from treatment with isoniazid for latent TB infection. In some settings, exclusion of active TB will also include a tuberculin skin test and/or chest X-ray. Collection of these data by all levels of staff involved in HIV testing and counselling or HIV treatment and care is simple. The indicator does not measure the quality of intensified TB case-finding nor does it reveal whether those identified as suspects are investigated further or effectively for TB. However, it does emphasize the importance of intensified TB case-finding for PLWHA at diagnosis and at every contact they have with HIV treatment and care services. Programmes should aim for a high value for this indicator (close to 100%) but should interpret it in conjunction with values of indicators B.1.2 and B.2.1 to ensure that appropriate action follows the screening process. A low value will demonstrate that Objective B - reducing the impact of TB among PLWHA - is unlikely to be met.
Importance	Core
Responsibility	NACP
Measurement tools	Modified HIV testing and counselling register or HIV treatment and care register

Indicator B.1.2 **Rate of new cases of TB diagnosed in clients attending HIV testing and counselling services or HIV treatment and care services**	
Definition	Number of cases of newly diagnosed TB identified in PLWHA attending for HIV testing and counselling or HIV treatment and care services (who were screened for TB symptoms), expressed as a proportion of all PLWHA attending HIV testing and counselling services and HIV treatment and care services (who were screened for TB symptoms)
Numerator	The number of cases of newly diagnosed TB identified in PLWHA attending for HIV testing and counselling or HIV treatment and care services who were screened for TB symptoms, over a given time period
Denominator	Total number of PLWHA attending for HIV testing and counselling or HIV treatment and care services who were screened for TB symptoms over the same given time period. (This is the same as the numerator in indicator B.1.1.)
Purpose	To provide information on the output of intensified TB case-finding described in indicator B.1.1 and demonstrate the additional cases of TB detected through collaborative TB/HIV activities.
Methodology	All HIV-positive clients at HIV testing and counselling facilities or those attending HIV treatment and care facilities should undergo intensified case-finding for TB as described in indicator B.1.1. Any client found to be a TB suspect through this screening process should be investigated further, either on site or after referral to the nearest TB clinic. NTP criteria should be used to define a TB suspect and for diagnosing TB. The number of newly diagnosed cases of TB in HIV-positive clients by this process should be collated. The data needed for this indicator will be routinely collected at the HIV testing and counselling or treatment and care facilities if these are capable of TB diagnosis. Otherwise, a referral system will need to be established which ensures that TB suspects are referred to the nearest TB clinic for investigation; the outcome of investigation should then be communicated back to the HIV testing and counselling or treatment and care facility.
Periodicity	Collected continuously and reported and analysed quarterly
Strengths and Limitations	This is an output indicator, which validates the process indicator B.1.1. It is important for demonstrating the contribution that collaborative TB/HIV activities can make in increasing TB case-detection rates and thereby reducing the burden of TB in PLWHA and their community. The indicator can be further broken down and reported by type of TB, e.g. pulmonary, smear-positive, smear-negative and extrapulmonary (if these data are routinely collected) and by type of facility (VCT centre, antenatal care clinic, HIV care clinic). The data needed for this indicator are more difficult to collect if TB diagnosis is not carried out on the same site as HIV testing or treatment and care. This will require the establishment of reliable two-way communication between the TB service and the HIV counselling and testing and treatment and care services. Values for this indicator will vary from site to site depending on the level of TB in the community and the quality (or community-perceived quality) of routine TB services. Thus it is not readily comparable between countries – and may even vary significantly at a sub-national level – but it will help to demonstrate the added value of collaborative activities to TB case detection.
Importance	Core
Responsibility	NTP
Measurement tools	Modified HIV treatment and care register, counselling and testing register, TB register or TB/HIV register

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

Indicator B.2.1 **Proportion of HIV-positive clients given treatment for latent TB infection**	
Definition	Number of newly diagnosed HIV-positive clients who are given treatment for latent TB infection (TB preventive therapy),[1] expressed as a proportion of the total number of newly diagnosed HIV-positive people
Numerator	Total number of newly diagnosed HIV-positive clients in whom active TB has been excluded who start (are given at least one dose of) treatment for latent TB infection
Denominator	Total number of newly diagnosed HIV-positive clients
Purpose	To ensure that eligible HIV-positive individuals are given treatment for latent TB infection and thus to reduce the incidence of TB in PLWHA
Methodology	The data needed for this indicator can be collected in all situations where counselling and testing for HIV are carried out, e.g. VCT centres, PMTCT sites, inpatient medical services, or at HIV care services, depending on where TB preventive therapy (TBPT) is to be administered. In all these situations, HIV-positive clients should be screened for TB, as suggested in indicator B.1.1. Those clients found *not* to have evidence of active TB will be offered TBPT according to nationally determined guidelines. All those accepting TBPT and receiving at least the first dose of treatment should be recorded. This information could be recorded in an extra column in the HIV care register. Accurately predicting drug requirements for supply management requires the collection of more detailed information: a TBPT register is needed, in which client attendance to collect further drug supplies (usually monthly) is recorded. From this, facilities would be able to report the number of new cases, continuing cases and completed cases on a quarterly basis. If such information is collected routinely, the indicator of choice would be 'the number of HIV-positive clients completing treatment of latent TB infection, as a proportion of the total number of HIV-positive clients started on such treatment. From pilot testing sites it is apparent that 10–50% of clients who test HIV-positive can be expected to start TBPT; some will not meet the eligibility criteria, some will decline and some will drop out during the screening process. The proportion likely to start TBPT depends on the screen used (for example, using tuberculin skin test as a screening tool reduces the number that are eligible) and also on the type of VCT facility. If a VCT facility sees mostly hospital or clinical referrals, a greater proportion would be expected to be sick and thus ineligible for treatment of latent TB infection. Higher proportions would be expected from sites linked to PMTCT or stand-alone VCT centres. Most programmes would aim for between 30% and 50% depending on the types of HIV testing and counselling facilities available.
Periodicity	Collected continuously and reported and analysed quarterly
Strengths and Limitations	The risk of developing TB is significantly increased in PLWHA. Treatment of latent TB infection will reduce the incidence of developing TB disease in PLWHA who are infected with TB but who have no active TB disease. To include clients who are given at least one dose is relatively easy, even in resource- limited settings. This information is the minimum necessary to ensure that TBPT is being offered to HIV-positive clients without evidence of active TB. However, unless further data are collected as detailed above, this indicator provides no information about how many clients adhere to or complete the TBPT course and thus no

[1] TB preventive therapy (TBPT) is given to individuals with latent infection with *Mycobacterium tuberculosis* in order to prevent progression to active disease. Several drug regimens are effective in treating latent TB infection; however, isoniazid preventive therapy (IPT) has been shown to be safer and more effective than other regimens and is currently the only regimen recommended in *Policy statement on preventive therapy against tuberculosis in people living with HIV: report of a meeting held in Geneva 18–20 February 1998*. Geneva, World Health Organization, 1998 (WHO/TB/98.225; UNAIDS/98.34).

	information about the likely effectiveness of the intervention. Much greater resources are required to collect more complete data on adherence or completion, but programmes may wish to undertake periodic studies to establish, for example, adherence rates, and the accuracy of the screening questionnaire.
Importance	Core
Responsibility	NACP. (The NTP would need to collect this information if it is responsible for drug supply.)
Measurement tools	Modified HIV testing register, HIV care register or TBPT register

B.3 TB infection control in health care and congregate settings

Indicator B.3.1 **Proportion of health care and congregate settings that have a TB infection control policy**	
Definition	Number of health care facilities and/or congregate settings with a written infection control policy, expressed as a proportion of the total number of health care facilities and/or congregate settings evaluated
Numerator	Number of health care facilities and/or congregate settings (e.g. prisons, refugee camps, military barracks) with a written infection control policy for TB that is consistent with international guidelines[1]
Denominator	Total number of health care facilities and/or congregate settings evaluated.* *Also give the total number of each type of facility nationally to indicate the proportion evaluated.
Purpose	To ensure that facility-level policy exists to minimize the risk of transmission of TB in settings where PLWHA are concentrated, such as primary health care clinics, hospitals, prisons.
Methodology	Facility-level review of written infection control policy with yes/no answers to the following: 1. Is there a written infection control policy? 2. Is the definition of a TB suspect clearly defined and consistent with national TB policy? 3. Is there clear guidance on the rapid investigation of TB suspects? 4. Is there guidance on how to separate TB suspects from those at risk of TB infection? A positive response to all questions is required for a facility to be identified as having a TB infection control policy that is consistent with international guidelines.
Periodicity	Collected annually from each facility at the time of supervisory visits and/or external review of TB/HIV activities or TB and HIV/AIDS programme reviews
Strengths and Limitations	The existence of a written infection control policy that addresses TB and is consistent with international guidelines is the first basic step in ensuring TB infection control in health care and congregate settings where HIV prevalence is high. However, the existence of a policy does not mean that it is effectively implemented. Further inquiry will be needed to establish whether the infection control policy is implemented and adhered to. Analysis of policy involves subjective judgement, which can limit its use in cross-national comparisons and for capturing trends over time. This indicator goes a step beyond measuring the simple existence of an infection control policy by defining standards that must be met in order for there to be an acceptable policy that addresses the issue of control of TB infection in health care and congregate settings with a high HIV prevalence according to international guidelines – thus eliminating some, though not all, subjective judgement.
Importance	Desirable, core for evaluation
Responsibility	NTP/NACP/review team
Measurement tools	Facility review checklist

[1] *Guidelines for the prevention of tuberculosis in health care facilities in resource-limited settings.* Geneva, World Health Organization, 1999 (WHO/CDS/TB/99.269).

Objective C

To decrease the burden of HIV/AIDS in TB patients

C.	To decrease the burden of HIV in TB patients
C.1	HIV testing and counselling
C.2	HIV prevention methods
C.3	Co-trimoxazole preventive therapy
C.4	HIV/AIDS care and support
C.5	Antiretroviral therapy

Confidentiality considerations

Providing optimal care to persons with HIV or TB requires knowing sensitive information. Care for TB patients is improved when TB care providers know patients' HIV status and can refer a patient for, or provide, appropriate preventive and treatment services. Similarly, the care of an HIV-infected person is improved when HIV care providers are aware of that person's TB infection or disease status, and can provide, or refer the patient for, appropriate TB treatment or prevention. However, this sensitive information must be maintained with the utmost confidentiality, and use of such information should adhere to published guidelines.[1] Data regarding HIV are generally considered to be more sensitive than data regarding TB. Sensitive information should be shared only with persons who need to know, usually those providing direct patient care. TB registers, TB/HIV registers, HIV treatment and care (TC) registers, and other documents that contain sensitive information must be stored in a secure location (such as a locked cabinet). Duplicate and unnecessary paperwork should be destroyed when it is no longer needed. Computerized databases that contain sensitive information should be protected by coded passwords and encryption. Particular care should be taken when referrals are made to other services and when information on a patient is transferred from one care facility to another (either manually or electronically). Each programme should develop a policy to ensure the confidentiality of patient data. In some cases, data used for these indicators may require the collection of sensitive, patient-level information. However, personal identifiers should be removed as soon as possible in the data collection or reporting process and as soon as they are no longer required for matching purposes. Where possible, disaggregated data should be collected and reported. Individual patient data will rarely be needed outside the facility level. For this reason, data reported to districts or for the purpose of collecting indicators in general should not contain patient-level information.

[1] CDC guidelines for national human immunodeficiency virus infection and acquired immunodeficiency syndrome. *Morbidity and Mortality Weekly Report*, 1999 48:RR-13.

C.1 Provision of HIV testing and counselling

Indicator C.1.1 **Proportion of all registered TB patients who are tested for HIV**	
Definition	Number of registered TB patients who are tested for HIV (after giving consent) expressed as a proportion of the total number of registered TB cases
Numerator	Total number of TB patients, registered over a given time period, who are tested for HIV (after giving consent) during their TB treatment
Denominator	Total number of TB patients, registered over the same given time period
Purpose	To assess the uptake of HIV testing by TB patients
Methodology	Ideally all TB patients should be offered an HIV test. It is preferable that this occurs within the context of the TB service provider, in which case the HIV test can be recorded in the patient record and a modified TB register and reported quarterly with the outcome data. In some settings, however, HIV counselling and testing will be carried out in a different part of the same facility or even at a distant site. Then, a referral system will need to be established such that the TB programme records when a TB patient is referred for an HIV test, and is notified when a TB patient attends for counselling and whether or not they are tested for HIV. Such information should be collected at the TB facility level and recorded in the facility or district TB register. Patient confidentiality must be maintained. It is preferable that TB patients are tested at the start of TB treatment so that they can benefit from appropriate care throughout their TB treatment. However, some patients are reluctant to undertake an HIV test until later in their TB treatment, once they feel stronger. A recording and reporting system should be able to capture these late tests – otherwise the total number of TB patients knowing their HIV status will be underreported.
Periodicity	Recorded continuously and reported and analysed quarterly at the time of reporting outcome of TB treatment. Reporting at the end of TB treatment allows for HIV testing to take place and results to be recorded at any time during TB treatment.
Strengths and Limitations	The risk of having HIV infection is higher among TB patients than in the general population. Knowledge of HIV status can help to reduce stigma, promote safe behaviour to reduce HIV transmission and improve access to appropriate care for TB patients whether HIV-positive or HIV-negative. Health care workers caring for TB patients need to know the HIV status of their patients to ensure that they are able to provide the most appropriate treatment, care and support during the TB treatment. Every TB patient should be encouraged to give consent for an HIV test. Uptake of testing will reflect the degree to which patients understand and accept the benefits of HIV testing, how effectively staff are able persuade patients to accept testing, and the availability, accessibility and quality of HIV testing and counselling resources. This indicator gives an overall measure of the acceptability and accessibility of HIV testing to TB patients. However, there are many factors that will influence whether a TB patient has an HIV test, including patient understanding of HIV, patient socioeconomic status, accessibility of testing centre, cost of the test, counselling skills and enthusiasm of health staff, societal attitudes to HIV testing and HIV in general, and reliability of HIV test supplies. If the indicator value is high this suggests that the system as a whole is likely to be working well; however, a low indicator value provides no indication of where the problem lies. If the indicator value is *very* high it is possible that TB patients are somehow coerced into having HIV tests or that adequate consent is not sought for the test. The indicator gives no information on whether a patient receives his or her test result or appropriate post-test counselling, both of which are crucial if any behaviour change is to be achieved to reduce HIV transmission.
Importance	Core
Responsibility	NTP

Measurement tools	Modified TB register, separate TB/HIV register or modified HIV counselling and testing register with quarterly analysis and reports. A referral mechanism and reporting of results between TB and HIV testing and counselling services will be needed if HIV testing is performed other than at the TB clinic.

Indicator C.1.2 **Proportion of all registered TB patients who are tested and are HIV-positive**	
Definition	Number of registered TB patients who are tested for HIV (after giving consent) and who test HIV-positive, expressed as a proportion of the total number of all registered TB patients who are tested for HIV
Numerator	Total number of all TB patients registered over a given time period who test HIV-positive (after giving consent) during their TB treatment
Denominator	Total number of TB patients registered over the same given time period who are tested for HIV (after giving consent)
Purpose	To assess the prevalence of HIV among TB patients. Measuring the proportion of HIV-positive TB patients gives important information for targeting of resources, strategic planning of activities and monitoring the effectiveness of HIV prevention interventions over time.
Methodology	In settings where HIV is driving the TB epidemic, all TB patients should be offered and encouraged to have an HIV test. National protocols for HIV counselling, testing and confirmation of results should be followed. It is preferable that HIV testing takes place early in the course of TB treatment so that TB patients receive optimal care depending on their HIV status. Some patients may not be prepared to have an HIV test immediately after being diagnosed with TB, and staff will need to encourage HIV testing at each follow-up visit for those who have not yet been tested. It is important, therefore, that the system is able to capture the results of an HIV test occurring at any time during a patient's TB treatment. TB patients who consent to HIV testing may be tested within the TB service or, if HIV testing and counselling are not available within the service, be referred to a separate HIV testing and counselling service. In the latter situation, a mechanism for reporting HIV results back to the TB service will need to be established. It is crucial that the results of the HIV test are known to both the health care staff in charge of TB care and the patient. HIV status will influence patient care plans (e.g. referral to PLWHA support group, CPT, ART, avoidance of streptomycin injections or thiacetazone), and the risk of ongoing HIV transmission can be reduced with appropriate post-test counselling for the patient. Confidentiality of patient information must be maintained and patient HIV status must be accessible only to health care staff directly responsible for an individual's care. HIV status can be recorded in facility and district TB registers. These TB registers should already be maintained confidentially as they contain patient specific health information; the addition of HIV status should therefore not require any change in the way the registers are maintained. Facility-level staff and the district TB coordinator should be responsible for ensuring the confidentiality of this information.
Periodicity	Recorded continuously and reported and analysed quarterly at the time of reporting outcome of TB treatment. Reporting at the end of TB treatment allows for HIV testing to take place and results to be recorded at any time during TB treatment.
Strengths and Limitations	All TB patients and the health care workers directly involved in their care should be aware of patients' HIV status so that the most appropriate information, risk behaviour counselling, treatment, care and support can be provided throughout and after their TB treatment. This indicator will measure the proportion of TB patients consenting to HIV testing who test HIV-positive. This defines an important population for specific interventions aimed at reducing the burden of HIV among TB patients and their communities, such as CPT and ARV. It will be

	used as the denominator for indicators that measure the uptake of these interventions (see indicators C.3.1, C.4.1 and C.5.1). Used in conjunction with national estimates for the prevalence of HIV in TB patients, it may assist in identifying variations in practice or the epidemiology of HIV in TB patients at more local levels. A high value relative to the national average may suggest that the true HIV prevalence among TB patients is higher in that particular area or may indicate that only patients with a higher risk of HIV infection are being encouraged to have a test. Any variation from expected results should stimulate further investigation. In countries where a high and representative proportion of all TB patients accept and undergo HIV testing (>80%), the value of this indicator will provide a robust estimate of the true HIV prevalence among TB patients[1] as well as the data necessary for indicator A.2.1. This information is useful for targeting of resources, planning of activities and monitoring the effectiveness of collaborative TB/HIV activities over time. It can be a powerful tool to raise both political and professional awareness of HIV-related TB and the need for a collaborative approach to the problem. It is also helpful to corroborate surveillance data on HIV prevalence in the general population obtained from other sources. If HIV-positive TB patients are stigmatized by health care workers or by their communities, HIV testing may have a negative impact. This indicator does not capture whether patients are made aware of their HIV status and should be used in conjunction with indicator C.1.3 to ensure that all TB patients who are tested for HIV are also given post-test counselling.
Importance	Core
Responsibility	NTP. NTP staff will have to follow up on the results of TB patients referred for HIV testing outside the TB service before submitting quarterly returns.
Measurement tools	Modified TB register, separate TB/HIV register or modified HIV counselling and testing register, with quarterly analysis and reports. A referral mechanism and reporting of results between TB and HIV testing and counselling services will be needed if HIV testing is performed at a separate site to the TB clinic.

[1] Further detail on HIV surveillance in TB patients can be found in *Guidelines for HIV surveillance among tuberculosis patients*, 2nd ed. Geneva, World Health Organization, 2004 (WHO/HTM/TB/2004.339; WHO/HIV/2004.06; UNAIDS/04.30E).

Indicator C.1.3 **Proportion of TB patients tested who receive post-test counselling**	
Definition	Number of registered TB patients who are tested for HIV (after giving consent) and who receive their results through post-test counselling, expressed as a proportion of all registered TB patients who are tested for HIV
Numerator	Number of TB patients registered over a given time period who are tested for HIV (after giving consent) and receive their results through post-test counselling
Denominator	Total number of TB patients registered over the same given time period who are tested for HIV (after giving consent)
Purpose	To assess the proportion of TB patients tested who receive post-test counselling. This will stress the importance of not only testing TB patients but also ensuring that they receive their HIV results and appropriate post-test counselling, depending on their HIV result. It will provide a measure of the accessibility of and staff commitment to post-test counselling.
Methodology	HIV testing and post-test counselling may not take place in the TB clinic or even on the same site as the TB clinic. Thus, it is important that a mechanism is in place to ensure that TB patients are both HIV-tested and, more importantly, that they receive their result through post-test counselling with a health care worker appropriately trained according to national protocols. The TB programme should also be informed of the result and that post-test counselling has taken place. If the whole process of HIV testing and post-test counselling takes place within the TB service, it will be simple to capture that information in a modified TB register or separate TB/HIV register. If any component of the HIV testing occurs outside the TB programme, a simple referral mechanism must be established to inform the TB programme when a patient has been tested, what the result is and whether the patient has received the result and post-test counselling.
Periodicity	Collected continuously and reported quarterly with the TB cohort outcome data
Strengths and Limitations	Post-test counselling is the most important element of HIV testing as it ensures that individual patients are aware of their HIV status, of how they can change their behaviour to reduce HIV transmission and, if positive, of what interventions are available to keep them healthy for as long as possible. It is important, especially when HIV results cannot be made available to patients on the same day, that there is some mechanism in place to ensure that TB patients who are tested do indeed receive their HIV test results. Requesting this data will help to underline the importance both of encouraging HIV testing for TB patients and of ensuring that patients receive their results through post-test counselling. This information can give no indication of the quality of post-test counselling or of individuals changing their behaviour to reduce transmission.
Importance	Desirable
Responsibility	NTP
Measurement tools	Modified TB register, separate TB/HIV register or modified HIV counselling and testing register, with quarterly analysis and reports. A referral mechanism and reporting of results between TB and HIV testing and counselling services will be needed if HIV testing is performed at a separate site to the TB clinic.

C.2 Promotion and provision of HIV prevention methods for TB patients

Indicator C.2.1 **Availability of free condoms at TB services**	
Definition	Number of TB facilities where free condom distribution is practised and condoms are available, expressed as a proportion of all TB facilities
Numerator	Total number of TB facilities (any health facility where TB patients are managed) where free condoms are available (in stock)
Denominator	Total number of TB facilities evaluated.* *Also give the total number of TB facilities nationally to indicate the proportion evaluated.
Purpose	To monitor commitment and capacity of programmes at facility level to promote HIV prevention among TB patients
Methodology	Ideally, data on this indicator should be collected on all supervisory visits made by the district TB manager and thus be available for all TB facilities. The indicator requires collection of information only on the presence of condoms at TB facilities, not on the number of condoms distributed.
Periodicity	Collected annually, at the time of supervisory visits and/or external review of TB control programmes.
Strengths and Limitations	Condoms are a simple, cheap and effective tool for preventing HIV transmission and as such should be made freely available for use by all groups at risk of HIV infection, including TB patients, especially in settings where the HIV epidemic is driving the TB epidemic. Availability of condoms at a facility is simple to measure and gives some indication of commitment at facility level to HIV prevention among TB patients. The absence of free condoms may indicate a failure of distribution either locally or nationally or a lack of commitment at facility level to maximizing HIV prevention opportunities. However, the indicator will give no information on why condoms are not available: the reasons for this will require further investigation. The availability of free condoms at a facility gives no indication of how many are distributed or whether the condoms are used appropriately or HIV infections are prevented. It provides no information about the ability of health care workers to encourage safe sexual or other risk practices among TB patients.
Importance	Optional, core evaluation.
Responsibility	NTP
Measurement tools	Facility review checklist

Note: in some settings it may be appropriate to create additional indicators (using the above indicator as a framework) for other HIV prevention interventions within the TB service; for example, where intravenous drug use is a common mode of HIV transmission, it may be useful to measure the frequency of safe needle exchange services available at TB facilities.

C.3 Co-trimoxazole preventive therapy during TB treatment

Indicator C.3.1 **Proportion of HIV-positive TB patients who receive CPT**	
Definition	Number of HIV-positive TB patients who receive (at least one dose of) CPT during their TB treatment, expressed as a proportion of the total number of HIV-positive TB patients
Numerator	Number of HIV-positive TB patients, registered over a given time period, who receive (at least one dose of) CPT during their TB treatment
Denominator	Total number of HIV-positive TB patients registered over the same given time period
Purpose	To monitor commitment and capacity of programmes to provide CPT to HIV-positive TB patients. It is important for programmes to know the proportion of HIV-positive TB patients who receive this potentially life-saving therapy.
Methodology	All HIV-positive TB patients should be given CPT during their TB treatment and for life thereafter[1] unless contraindicated or unless they receive ART and their CD4 cell count rises above 500/mm^3. TB patients may have been identified as HIV-positive and started on CPT before being diagnosed with TB; they should continue CPT throughout TB treatment and be included in the denominator. To gain maximum benefit, TB patients should start CPT as soon as possible after HIV infection is diagnosed, as mortality is highest early in the course of TB treatment. However, TB patients may not have access to HIV testing immediately after diagnosis of TB or may not wish to be tested until later in their TB treatment. To be able to include all HIV-positive TB patients who start CPT during TB treatment, it will be necessary to assess and report this at the end of TB treatment. This can be achieved using a modified TB register or separate TB/HIV register in which HIV status and CPT are recorded. These data can then be reported along with the quarterly cohort outcome data. The use in the definition of the clarifying statement – that patients be given at least one dose of CPT – is intended to capture all patients who have been assessed and started on treatment. It does not imply that one dose of CPT is sufficient. If CPT is not provided by the TB programme but through HIV care or other services, a mechanism should be established to ensure that information about a patient's CPT is passed on to and recorded by the NTP, again in a modified TB register or separate TB/HIV register.
Periodicity	Collected continuously and reported and analysed quarterly at the end of TB treatment along with the outcome of TB treatment.
Strengths and Limitations	Common HIV-related infections contribute to the high mortality rates seen in TB patients in settings with a high HIV burden. CPT can significantly reduce morbidity in all PLWHA and morbidity and mortality among HIV-positive TB patients. This indicator measures the degree to which CPT is considered an essential component of the package of care offered to HIV-positive patients with TB and shows whether TB services are able to ensure that HIV-positive TB patients receive CPT. It will not provide information on when CPT is started during TB treatment or on adherence to treatment. TB programmes may wish to distribute and monitor adherence to CPT in the same way that they distribute and monitor adherence to TB therapy, in which case they may choose to report on CPT adherence. However the public health impact of poor compliance with CPT is less than with TB treatment, so it is considered to be a lower priority for programmes to routinely record and report CPT adherence. The proportion of HIV-positive TB patients starting CPT will be affected by a number of factors, including drug availability, the degree to which health care providers encourage CPT as an

[1] *Provisional WHO/ UNAIDS secretariat recommendations on the use of cotrimoxazole prophylaxis in adults and children living with HIV/AIDS in Africa*. Geneva, Joint United Nations Programme on HIV/AIDS and World Health Organization (http://www.unaids.org/en/other/functionalities/ViewDocument.asp?href=http://gva-doc-owl/WEBcontent/Documents/pub/Publications/IRC-pub04/recommendation_en%26%2346;pdf accessed 24 May 200404).

	essential part of patient care, and the success of communication messages promoting the benefits of CPT for HIV-positive TB patients.
Importance	Core in Africa and any other setting where national policy recommends CPT for all HIV-positive people or HIV-positive TB patients
Responsibility	NTP/NACP
Measurement tools	Modified TB register, a separate TB/HIV register, or a system to transfer data to TB programme if CPT provided outside the TB service

C.4 Access to HIV/AIDS care and support during TB treatment

Indicator C.4.1 **Proportion of HIV-positive TB patients referred to HIV care and support services during TB treatment**	
Definition	Number of HIV-positive TB patients referred to HIV care and support services (as defined in local or national HIV/AIDS policy) during TB treatment, expressed as a proportion of the total number of HIV-positive TB patients
Numerator	Number of HIV-positive TB patients, registered over a given time period, who are referred to HIV care and support services during their TB treatment* *This may be reported as a composite indicator of referral to any HIV care and support services or may be broken down and reported by each individual service, e.g. number referred to PMTCT, number referred to PLWHA support group. Referral to ART services should be excluded as this is covered separately – see Indicator C.5.1
Denominator	Total number of HIV-positive TB patients registered over the same given time period
Purpose	Process indicator to measure commitment and capacity of TB service to ensure that HIV-positive TB patients are able to access the care and support services that are available
Methodology	The means to measure this indicator will depend on what services are available for PLWHA and where they are provided. All HIV care and support services may be provided at one site, in which case only one referral will be necessary. It will be relatively straightforward to record such referrals in a modified TB register or separate register for HIV-positive TB patients by use of a checkbox. It is more likely that the range of care and support services will be offered by a variety of providers at different sites. It may therefore be necessary to have a checklist of services in the TB or TB/HIV register where referral to each available service can be recorded. Diagnosis of HIV may occur at any time during TB treatment – and the need for referral to specific services may also arise at any time during TB treatment. It is thus important that the information for this indicator be collected and reported at the end of TB treatment with the quarterly cohort outcome data. Data can be collected as a single indicator, i.e. number of HIV-positive TB patients who are referred to any HIV care and support service during their TB treatment. Alternatively, if more detailed information is required for programme management, these data can be reported by each separate care and support service, e.g. number of HIV-positive TB patients who are referred to PLWHA support group, number of HIV-positive TB patients who are referred to PMTCT service. Referral to ART services should not be included as it is detailed in Indicator C.5.1.
Periodicity	Collected continuously and reported quarterly with data on cohort outcomes
Strengths and Limitations	Wherever TB patients are encouraged to undergo HIV testing, new cases of HIV infection will be identified. In addition to quality post-test counselling, it is important that TB patients newly diagnosed with HIV infection are able to access the full range of care and support services that are available for PLWHA, as stipulated in local and national HIV/AIDS policy. The services available will vary between, and even within, countries depending on resources and the needs of local populations. Such care and support services may include post-test clubs, PLWHA support groups, nutritional, social or psychological support services, and PMTCT for

	pregnant women. This indicator aims to ensure that TB health care workers are aware of the needs of HIV-positive TB patients and are referring them to appropriate care and support services. This will capture only the first step in the referral process and gives no information on whether patients accept the need for referral, attend the service, or receive appropriate care and support if they do attend. Low rates of referral may indicate a lack of services in some areas or lack of awareness of the services available among TB staff. In settings where HIV and TB services are fully integrated and provided within the same site, it will be simple to record what additional care services they have been given.
Importance	Desirable
Responsibility	NTP
Measurement tools	Modified TB register or separate TB/HIV register

C.5 Access to antiretroviral treatment

Indicator C.5.1 **Proportion of HIV-positive registered TB patients given ART during TB treatment**	
Definition	Number of HIV-positive registered TB patients who are started on ART or continue previously initiated ART, during or at the end of TB treatment, expressed as a proportion of all HIV-positive registered TB patients
Numerator	All HIV-positive TB patients, registered over a given time period, who receive ART (are started on or continue previously initiated ART)
Denominator	All HIV-positive TB patients registered over the same given time period.
Purpose	Outcome indicator to measure commitment and capacity of TB service to ensure that HIV-positive TB patients are able to access ART
Methodology	Data collection methods will depend on who provides ART for TB patients. In settings where TB patients are assessed for eligibility and started on ART by TB programme staff, data for this indicator can be captured in a modified TB register or separate TB/HIV register. The data should be reported at the completion of TB treatment in order to include all TB patients started on ART at any time over the course of their TB treatment. In settings where TB patients are referred to HIV or other care services to be assessed and started on ART, a system must be established to ensure that the TB programme is informed of the outcome of the referral, i.e. whether or not TB patients are started on ART or not, and that this information is recorded in a modified TB register or TB/HIV register. This is important not only for programme management but also for individual patient care. TB staff need to be aware of a TB patient being started on or continuing ART so that they can manage drug reactions and interactions appropriately. TB patients may be started on ART at any time during their TB treatment. The start of ART may be delayed by a delay in HIV testing or to reduce the risk of drug interactions occurring in the intensive phase. The data collection methods should be able to capture ART treatment starting at any time during TB treatment.
Periodicity	Collected continuously and reported with the quarterly cohort outcome data
Strengths and Limitations	ART significantly improves the quality of life, reduces morbidity and enhances the survival of people with advanced HIV infection or AIDS. HIV-positive TB patients are one of the largest groups already in contact with the health service who are likely to benefit from ART, and efforts should be made to identify and treat those who are eligible. This indicator measures the degree to which ART has become a component of the package of care offered to HIV-positive TB patients and provides a measure of the accessibility of ART to HIV-positive TB patients, drug availability, the degree to which health care providers encourage ART as a part of routine care, and the success of TB and ART health services to refer, manage, and track registered TB patients eligible for ART (i.e. the strength of the referral process). It does not measure whether patients are treated correctly with an appropriate regimen, at what point during TB treatment patients are started on ART, whether they adhere to therapy, or the quality of patient monitoring or follow-up. It also cannot measure the impact of ART among persons who are treated. The expected values for the indicator will vary depending on national eligibility criteria for ART and whether or not CD4 cell counting is available. It would be expected that, in the absence of CD4 cell counts, most HIV-positive TB patients would be started on ART; with the exception of those who decline or who, for some other reason, are not eligible to start ART. This indicator must therefore be interpreted with caution, particularly when comparing one country with another.
Importance	Core. Data should be collected for this indicator even in settings where ART is not available in the public sector as this information is in itself important.
Responsibility	NACP and NTP
Measurement tools	Modified TB register, modified HIV care register or separate TB/HIV register with referral system (where appropriate)

Objective D

Indicators not included in the main objectives stated in the *Interim policy*[1]

D.1 Political commitment to collaborative TB/HIV activities

Indicator D.1.1 **National TB policy addresses links between TB and HIV**	
Definition	National TB control policy, endorsed by government, addresses the link between TB and HIV, and the potential impact that HIV may have on TB control throughout the country
Purpose	Input indicator to measure government commitment to TB/HIV collaboration by evaluating whether government TB policy assesses and addresses the potential impact that HIV may have on TB control
Methodology	National TB control policy should reflect international policy guidance on collaborative TB/HIV activities. A content analysis of the government's TB policies, plans and/or guidelines should be conducted and matched against the checklist of key policy components (see below). The measurement of this indicator is yes/no; the national policy is either complete or incomplete. A policy is considered to be complete if it contains all of the following eight key components: • Explicit recognition of the potential impact of HIV on TB control • Inclusion of NACP representative in planning process of NTP • Surveillance of HIV prevalence among TB patients that is consistent with international recommendations • IEC strategy for TB that includes appropriate information about HIV • Training for those working in TB that includes appropriate information about HIV • Intensified TB case-finding recommended in all who test positive for HIV • HIV-infected TB patients eligible for ART when indicated as per national protocols • TB patients who are HIV-infected to have full access to the continuum of care for PLWHA. Additional components required for countries with a generalized HIV epidemic (>1% in the general population): • Establishment of a national TB and HIV coordinating body, technical advisory committee or task force • HIV testing and counselling routinely offered to all patients diagnosed with TB • CPT for all HIV-positive TB patients and all PLWHA consistent with international guidelines. Supporting documentation should include the policy/plan/guideline itself and should state where and by whom it was issued.
Periodicity	Measured at the national level every 3–5 years if complete or annually if not complete
Strengths and Limitations	A national TB control policy is an official government statement that establishes goals for TB control, includes strategies for attaining them and guides implementation of a comprehensive TB control programme. The magnitude of the impact of HIV on TB control makes it essential for governments to accept the link between TB and HIV and explicitly address, within the national TB control policy, the potential impact of HIV on TB control in their setting. Measuring political commitment and policy analysis involves some subjective judgement and limits use in cross-national comparisons and for capturing trends over time. This indicator goes a step beyond measuring the simple existence of a TB prevention and control policy by defining standards that must be met in order to have a "complete" policy that addresses the issue of HIV according to international guidelines, thus eliminating some, though not all,

[1] *Interim Policy on Collaborative TB/HIV Activities*. Geneva, World Health Organization, 2004 (WHO/HTM/TB/2004.330; WHO/HTM/HIV/2004.1).

	subjective judgement. This indicator is useful in identifying countries that lack a formal and complete policy and that are therefore in most need of policy development work.
Importance	Desirable, core for evaluation
Responsibility	NACP, external evaluation team
Measurement tools	Review list of key components through a policy audit of ministry of health and NTP records and policies

Indicator D.1.2 **National HIV/AIDS policy address links between TB and HIV**	
Definition	National HIV/AIDS control policy, endorsed by government, addresses the link between TB and HIV and the importance of TB as a major treatable and preventable cause of morbidity and mortality among PLWHA
Purpose	Input indicator to measure government commitment to TB/HIV collaboration by evaluating whether national HIV/AIDS policy addresses the diagnosis, treatment and prevention of TB in PLWHA
Methodology	National HIV/AIDS policy should reflect international policy guidance on collaborative TB/HIV activities. A content analysis of the government's HIV/AIDS policies, plans and/or guidelines should be conducted and matched against the checklist of key policy components (see below). The measurement of this indicator is yes/no; the national policy is either complete or incomplete. A policy is considered to be complete if it contains the following 10 key components: • Explicit recognition of the potential impact of morbidity and mortality from TB in PLWHA • Inclusion of NTP representative in planning process of NACP • Surveillance of HIV prevalence among TB patients that is consistent with international recommendations • IEC strategy for HIV that includes appropriate information about TB • Training for those working in HIV that includes appropriate information about TB • Intensified TB case-finding recommended in all who test positive for HIV • HIV-infected TB patients eligible for ART when indicated as per national protocols • TB patients who are HIV-infected to have full access to the continuum of care for PLWHA • Access to investigation and treatment for TB is part of basic package of care for PLWHA • Treatment of latent TB infection to be offered to all PLWHA consistent with international guidelines. Additional components required for countries with a generalized HIV epidemic (>1% in the general population): • Establishment of a national TB and HIV coordinating body, technical advisory committee or task force • HIV testing and counselling routinely offered to all patients diagnosed with TB • CPT for all HIV-positive TB patients and all PLWHA consistent with international guidelines. Supporting documentation should include the policy/plan/guideline itself and should state where and by whom it was issued.
Periodicity	Should be measured at the national level every 3–5 years if complete or annually if not complete
Strengths and Limitations	A national HIV/AIDS control policy is an official government statement that establishes goals for HIV/AIDS control, includes strategies for attaining them and guides implementation of a comprehensive HIV/AIDS control programme. It is essential that the government and national HIV/AIDS control programme explicitly address the link between HIV and TB. TB prevention

	and treatment are key components of national HIV/AIDS policy, and access to TB diagnosis and treatment should be part of the minimum package of care for PLWHA. Measuring political commitment and policy analysis involves some subjective judgement and limits use in cross-national comparisons and for capturing trends over time This indicator goes a step beyond measuring the simple existence of an HIV/AIDS prevention and control policy by defining standards that must be met in order to have a "complete" policy that addresses the issue of TB according to international guidelines, thus eliminating some, though not all, subjective judgement. This indicator is useful in identifying countries that lack a formal and complete policy and that are therefore in most need of policy development work.
Importance	Desirable, core for evaluation
Responsibility	NTP, external evaluation team.
Measurement tools	Review list of key components through a policy audit of ministry of health, national AIDS council/commission and NACP records

D.2 Partnership development and collaboration

One of the benefits that has arisen from pilot projects of collaborative TB/HIV activities is the development of stronger partnerships and collaboration between TB and HIV programmes and between government and other stakeholders, such as NGOs. An important element of health sector reform is the increased involvement of NGOs and the private and other sectors in health. A standardized indicator for demonstrating the extent of partnerships and collaborations would be useful for external evaluation or research.

Indicator D.2.1 **Involvement of a comprehensive range of governmental, nongovernmental, community and private partners in collaborative TB/HIV activities**	
Definition	Number of potential partners in collaborative TB/HIV activities who are actively involved in the planning, implementation and monitoring of collaborative TB/HIV activities, expressed as a proportion of all potential partners
Numerator	Number of potential partners who are actively involved in the planning, implementation or monitoring of collaborative TB/HIV activities
Denominator	The total number of potential partners in collaborative TB/HIV activities at national level
Purpose	Process indicator to measure how comprehensive and inclusive collaborative TB/HIV activities are and to ensure that all relevant partners participate in the planning, implementation and monitoring of collaborative TB/HIV activities
Methodology	An initial analysis will be necessary to create a checklist of all key partners that should be involved in the planning, implementation or monitoring of collaborative TB/HIV activities across all sectors at national level. From this list the proportion of the potential partners that are actually involved in activities should be established. This can be done by analysis of national TB, HIV and TB/HIV annual plans, meeting reports and minutes, and interviews with key TB and HIV programme staff. Involvement should be defined as representation at meetings of the national TB/HIV coordinating body, inclusion of collaborative TB/HIV activities in the policies of the partner's organization, actual delivery of any collaborative TB/HIV activities (as defined in the WHO *Interim Policy*[1]) or responsibility for monitoring or evaluating collaborative TB/HIV activities. The range of potential partners includes: • other government sectors – ministries of employment, education, industry, finance,

[1] *Interim Policy on Collaborative TB/HIV Activities*. Geneva, World Health Organization, 2004 (WHO/HTM/TB/2004.330; WHO/HTM/HIV/2004.1).

	transport, defence, justice, environment • private sector organizations • professional organizations • civil society organizations – human rights groups, patient groups • representatives of religious leaders • implementation agencies • nongovernmental organizations • community-based organizations • academic and other public institutions • technical and donor organizations. A similar indicator could be developed to assess the involvement of key stakeholders at district level.
Periodicity	Collected annually
Strengths and Limitations	HIV-related TB is primarily a medical condition; however, the factors that influence the transmission and management of TB, HIV and TB/HIV co-infection go beyond the health sector and can be influenced by the involvement of different partners from different sectors. It is important to demonstrate that partners from all relevant sectors are involved in the planning, implementation and monitoring of collaborative TB/HIV activities to ensure the most effective multisectoral response to the linked epidemics of TB and HIV.[1] This indicator is limited in that it can only enumerate the organizations involved and not give any information about the strength of the partnerships, the degree of involvement of the various partners or the impact of their involvement. A definition of "involvement" has been attempted but remains subjective and therefore prone to variation between observers. The list of potential partners in collaborative TB/HIV activities will vary from country to country, but the proportion of these potential collaborators that are actually involved should be comparable between countries and over time. It may be time-consuming to create the list of all potential partners but the exercise will be helpful for identifying partners and increasing their involvement – and in subsequent years the list will only require updating.
Importance	Desirable for evaluation
Responsibility	External review team
Measurement tools	Analysis of information from TB, HIV and TB/HIV annual plans and policies, minutes of coordinating body meetings and interviews with key staff compared with a country-specific checklist of partners

[1] *The power of partnership*. Geneva, World Health Organization, 2003 (WHO/HTM/STB/2003.24).

D.3 Financial resources allocated or available for collaborative TB/HIV activities

Indicator D.3.1 **Percentage of total budget required for planned collaborative TB/HIV activities that was actually available**	
Definition	Total funds that were available for collaborative TB/HIV activities in the most recently completed fiscal year, expressed as a percentage of the total funds budgeted for collaborative TB/HIV activities in the annual plan(s) of the same year
Numerator	Total funds that were available or allocated for collaborative TB/HIV activities from any source (e.g. government, loans, grants, Global Fund to Fight AIDS, Tuberculosis and Malaria) in the most recently completed fiscal year
Denominator	Total funds budgeted for collaborative TB/HIV activities in the annual TB, HIV and/or TB/HIV work plan(s) of the same fiscal year
Purpose	This input indicator measures the extent to which adequate funding is available to implement the collaborative TB/HIV activities defined in the annual TB/HIV work plan and/or the annual TB and annual HIV/AIDS work plans. It also indicates the extent to which resource mobilization for TB/HIV collaborative activities has been successful, and whether or not lack of funds is an important constraint to achieving the objectives of the annual work plan.
Methodology	All collaborative TB/HIV activities (as defined in the WHO *Interim Policy on Collaborative TB/HIV Activities*[1]) detailed in the annual HIV/AIDS, TB or TB/HIV work plans should have a relevant budget line in the annual programme budgets. The numerator should include funds from all sources (e.g. government, ministry of finance, loans, grants, Global Fund) that were allocated for collaborative TB/HIV activities in the previous fiscal year. Funds may be allocated through the NTP, the NACP or any other mechanism. The denominator is the corresponding annual figure budgeted for the annual work plan or mid-term development plan. Data on available funding should be compiled and then compared with the budget defined in the annual plan of activities.
Periodicity	Measured annually
Strengths and Limitations	The percentage of total funds required that is actually available indicates whether the goals and objectives in the annual plans and mid-term development plan are realistic and sustainable over the planning period. Identification of the magnitude of the funding gap is useful for advocacy and resource mobilization purposes. A possible limitation is that a high percentage, while possibly suggesting that funds were adequately mobilized, could also indicate that the activities included in the annual plan were not sufficiently ambitious. For appropriate interpretation of this indicator, it is therefore necessary to consider the adequacy of the national plan for collaborative TB/HIV activities. Furthermore, many HIV and TB programmes may not yet have specific budget lines for collaborative TB/HIV activities since this is a relatively new approach. However, as collaborative TB/HIV activities become national policy and are included in the annual work plans of the NTP and NACP and/or the annual TB/HIV plan, they should also be allocated a specific budget line in the corresponding annual budgets. The absence of appropriate line items in the budgets once these activities form part of national plans will be useful information in itself and may indicate inadequacy in budgeting. A more general limitation of this indicator is that most existing budgets for TB and HIV collaborative activities focus on costs specific to TB or HIV control: they rarely include an assessment of the costs associated with using general health system resources (e.g. multipurpose staff and buildings) for implementation of TB/HIV collaborative activities. Therefore, it is unlikely that this indicator will be able to assess the extent to which funding for resources that TB and HIV programmes share with other programmes/services is adequate. To make valid comparisons over time, the line items included in the budgets (the

[1] *Interim Policy on Collaborative TB/HIV Activities*. Geneva, World Health Organization, 2004 (WHO/HTM/TB/2004.330; WHO/HTM/HIV/2004.1).

	denominator) must remain fairly consistent.
Importance	Desirable, core for evaluation
Responsibility	NTP and NACP
Measurement tools	Annual plans and budgets of the NTP and NACP, and/or TB/HIV annual plan and budget

Glossary

evaluation

A more formal process than monitoring, which explores a perceived problem or issue in the programme. It is time- and resource-intensive and may require more in-depth analysis of additional data sources including staff reports, medical records, interviews with staff and/or clients, focus groups, and other qualitative methods. For this reason it is usually carried out less frequently or comprehensively than routine monitoring.

impacts

The programme results achieved in the population, such as reduction of morbidity and mortality. It is often difficult to determine to what extent these achievements can be attributed to a particular intervention or programme.

impact evaluation

Determines the long-term effect of the programme on the population and progress towards the final goals. Impact evaluations involve more complex data collection and analysis than outcome evaluations, and require data from epidemiological surveillance. They are not undertaken routinely and are usually reserved for specific situations, such as determining the success of a project for scale-up or replication.

inputs

The human and financial resources, physical facilities, equipment, clinical guidelines, and operational policies that are the core ingredients of a programme and enable delivery of health services.

monitoring

The routine tracking of input, process and outcome data collected on a regular and continuing basis. Monitoring is used to assess the extent to which a policy, strategy or programme is achieving activity targets on schedule. It aims to identify evidence of any diversion from a planned course of action, thus identifying the need for a more formal evaluation of the activities and allowing timely solutions to be sought for identified problems. Monitoring is likely to make use of routine records and regular reporting systems, as well as health facility observation and client surveys. Data are usually collected at the facility level, compiled at district level, and aggregated at regional and national level. Feedback of analysed data to district and facility level for performance management is essential.

outcomes

The changes measured at the **population level**, some or all of which may be the result of a given programme or intervention. Outcomes refer to specific results – such as improvements in case detection and treatment success rates – that are clearly related to the programme.

outcome evaluation

Measures the achievement of the short-term strategic objectives of the programme, e.g. numbers tested for HIV or case detection rates for TB. These do not necessarily result in any impact but will be more readily available at an earlier date than impact data.

outputs

The results of **programme level** effort. In most cases, monitoring and evaluation are limited to outputs because these data are collected on a routine basis. Outputs include the number of activities conducted in each functional area of service delivery – for example, commodities and logistics, management and supervision, or training. Service delivery outputs may measure the volume of services provided to the target population, as well as the adequacy of the service delivery system in terms of access, quality of care, and programme image/client satisfaction.

processes

The multiple activities that are carried out to achieve the objectives of programmes.

process evaluation

Used to measure the quality and integrity of programme implementation and to assess coverage (the extent to which the target population is reached). The results of process evaluations are intended to inform mid-course corrections in the programme to improve effectiveness.

surveillance

The systematic and regular collection, analysis, evaluation, and dissemination of data used to drive public health decision-making. Data may be collected actively, such as in a seroprevalence survey, or passively through the routine reporting of TB cases presenting to health facilities. Routine surveillance data are usually collected at the health facility or community level and aggregated up through the administrative units to yield national or sub-national estimates. While surveillance data are an important source for monitoring and evaluation, surveillance should not be confused with, or substituted for, actual programme monitoring. Surveillance data provides outcome/impact-level information on disease status, but little or no information on programme activities.

Additional resources

National AIDS councils: monitoring and evaluation operations manual. Geneva, United Nations Joint Programme on HIV/AIDS, 2002 (UNAIDS/02.47E).

National AIDS programmes: a guide to monitoring and evaluation. Geneva, United Nations Joint Programme on HIV/AIDS, 2000 (UNAIDS/00.17E).

National AIDS programmes: a guide to monitoring and evaluating HIV/AIDS care and support. Geneva, United Nations Joint Programme on HIV/AIDS, 2004 (UNAIDS/04.05E).

The use of indicators for communicable disease control at district level. Geneva, World Health Organization, 2001 (WHO/CDS/TB/2001.289).

Rehle T et al., eds. *Evaluating programs for HIV/AIDS prevention and care in developing countries: handbook for program managers and decision makers*. Arlington, VA, Family Health International, 2001.

UNDP Monitoring and Evaluation Website
http://cfapp1.undp.org/undpweb/eo/evalnet/docstore3/yellowbook/

MEASURE Evaluation Website
http://www.cpc.unc.edu/measure/publications/

Appendix - Summary table of indicators

Indicator and definition	What to measure	Data Sources	Level	Periodicity	Status
Indicator A.1.1 The existence of a TB/HIV coordinating body or mechanism effective at all administrative levels of the health service, with representation from all the major stakeholders in collaborative TB/HIV activities, which meets at least quarterly	Simple yes/no answer at each level of the administration to the following questions: • Is there a TB/HIV coordinating body or mechanism at national level? • Does it have representation from all major stakeholders in TB and HIV control? • Does it meet at least quarterly, with minutes circulated? • Is a similar mechanism effective at all sub-national levels where both TB and HIV are prevalent?	Interviews with key programme staff, review of coordinating body meeting minutes, policy analysis	National, regional, district	Annual	Desirable (core for evaluation)
Indicator A.2.1 Number of all registered TB patients who are HIV-positive, expressed as a proportion of all registered TB patients	*Numerator:* Total number of newly registered TB patients (registered over a given period) who are HIV-positive, *Denominator*: Total number of newly registered TB patients (registered over the same given period) who were tested for HIV and included in the surveillance system	TB register, TB/HIV register VCT register Sentinel surveillance Special surveys	National, regional, district, facility	Quarterly for routine data, 2-5 yearly for special surveys	Core
Indicator A.3.1 Existence of joint planning for collaborative TB/HIV activities between the NTP and NACP	Content analysis of the joint TB/HIV plan and budget endorsed by NTP & NACP, matched against checklist of key components. In the absence of a joint TB/HIV plan, a content analysis of both NTP and NACP plans should be carried out. • Definition of roles and responsibilities for NTP & NACP • Joint resource mobilization • Joint human resource capacity development • Joint pre-service and in-service training for all HCW • Joint communication and advocacy strategy • Joint plan for community involvement • Joint plan for operational research in collaborative TB/HIV activities • Joint approach to monitoring and evaluation	NACP, NTP, TB/HIV annual plans	National	Annual	Desirable (core for evaluation)
Indicator A.3.2 Number of TB and HIV service delivery points where IEC materials giving information on both HIV and TB, their interaction and their prevention are available, expressed as a proportion of all TB and HIV service delivery points	*Numerator*: Total number of TB and HIV service delivery points where IEC materials on both HIV and TB, their interaction and their prevention are available *Denominator*: Total number of TB and HIV service delivery points evaluated	Facility visits as part of regular supervision or external review	National, regional, district, facility	Annual	Optional (core for evaluation)
Indicator A.4.1 Presence of an integrated national monitoring and evaluation system for collaborative TB/HIV activities that informs the annual NTP and NACP planning cycles and their mid-term (3–5 year) plans	Two-part question with simple yes/no answers A. Routine monitoring: Evidence that the annual TB/HIV monitoring report informs annual planning process of both TB and HIV programmes B. Evaluation: Evidence that the report from the detailed mid-term evaluation of collaborative TB/HIV activities informs the mid-term planning process of both TB and HIV programmes	Analysis of annual TB, HIV and TB/HIV plans and key TB and HIV programme staff interviews	National	A. Annually for monitoring B. Every 3–5 years for evaluation	Desirable (core for evaluation)

Indicator and definition	What to measure	Data sources	Level	Periodicity	Status
Indicator B.1.1 Number of PLWHA, attending for HIV testing and counselling or HIV treatment and care services, who were screened for TB symptoms expressed as a proportion of all PLWHA attending for HIV testing and counselling or HIV treatment and care services	*Numerator:* Number of PLWHA attending for HIV testing and counselling or HIV treatment and care services who were screened for TB symptoms, over a given time period *Denominator:* Total number of PLWHA attending for HIV testing and counselling or HIV treatment and care services, over the same given time period	HIV testing and counselling facility registers and HIV care and support registers	National, regional, district, facility	Continuous data collection. Quarterly reports	Core
Indicator B.1.2 Number of cases of newly diagnosed TB identified in PLWHA attending for HIV testing and counselling or HIV treatment and care services (who were screened for TB symptoms), expressed as a proportion of all PLWHA attending for HIV testing and counselling services and HIV treatment and care services (who were screened for TB symptoms)	*Numerator:* Number of cases of newly diagnosed TB identified in PLWHA attending HIV testing and counselling or HIV treatment and care services (who were screened for TB symptoms), over a given time period *Denominator:* Total number of PLWHA attending for HIV testing and counselling or HIV treatment and care services (who were screened for TB symptoms), over the same given time period	Modified HIV treatment and care register, HIV counselling and testing register, TB register or TB/HIV register	National, regional, district, facility	Continuous data collection. Quarterly reports	Core
Indicator B.2.1 Number of newly diagnosed HIV-positive clients who are given treatment for latent TB infection, expressed as a proportion of the total number of newly diagnosed HIV-positive people	*Numerator:* Total number of newly diagnosed HIV-positive clients who start (given at least the first dose) treatment for latent TB infection *Denominator:* Total number of newly diagnosed HIV-positive clients	Modified HIV testing register, HIV care register or TB preventive therapy register	National, regional, district, facility	Continuous data collection. Quarterly reports	Core
Indicator B.3.1 Number of health care facilities and/or congregate settings with a written infection control policy, expressed as a proportion of the total number of health care facilities and/or congregate settings evaluated	*Numerator:* Number of health care facilities and/or congregate settings with a written infection control policy for TB that is consistent with international guidelines *Denominator:* Total number of health care facilities and/or congregate settings evaluated	Facility visits as part of regular supervision or external review	National, regional, district, facility	Annual	Desirable (core for evaluation)
Indicator C.1.1 Number of registered TB patients who are tested for HIV (after giving consent) expressed as a proportion of the total number of all registered TB cases	*Numerator*: Total number of TB patients, registered over a given time period, who are tested for HIV (after giving consent) during their TB treatment. *Denominator:* Total number of TB patients registered over the same given time period	Modified TB register, modified HIV counselling and testing register or TB/HIV register	National, regional, district, facility	Continuous data collection. Quarterly reports	Core
Indicator C.1.2 Number of registered TB patients who are tested for HIV (after giving consent), and who test HIV-positive, expressed as a proportion of the total number of all registered TB patients who are tested for HIV	*Numerator*: Total number of all TB patients registered over a given time period who test HIV-positive (after giving consent) during their TB treatment *Denominator*: Total number of TB patients registered over the same given time period who are tested for HIV (after giving consent)	Modified TB register, modified HIV counselling and testing register or TB/HIV register	National, regional, district, facility	Continuous data collection. Quarterly reports	Core

Note: Indicators highlighted in colour are considered core indicators for monitoring collaborative TB/HIV activities

Indicator and definition	What to measure	Data sources	Level	Periodicity	Status
Indicator C.1.3 Number of registered TB patients who are tested for HIV (after giving consent), and receive their results through post-test counselling, expressed as a proportion of all registered TB patients who are tested for HIV	*Denominator:* Number of TB patients registered over a given time period who are tested for HIV (after giving consent) and receive their results through post-test counselling *Numerator:* Total number of TB patients registered over the same given time period who are tested for HIV	Modified TB register, modified HIV counselling and testing register or TB/HIV register	National, regional, district, facility	Continuous data collection. Quarterly reports	Desirable
Indicator C.2.1 Number of TB facilities where free condom distribution is practised and condoms are available, expressed as a proportion of all TB facilities	*Numerator*: Total number of TB facilities (any health facility where TB patients are managed) where free condoms are available (in stock) *Denominator*: Total number of TB facilities evaluated	Facility visits as part of regular supervision or external review	National, regional, district, facility	Annual	Optional (core for evaluation)
Indicator C.3.1 Number of HIV-positive TB patients who receive (at least one dose of) co-trimoxazole preventive therapy (CPT) during their TB treatment, expressed as a proportion of the total number of HIV-positive TB patients	*Numerator:* Number of HIV-positive TB patients, registered over a given time period, who receive (at least one dose of) CPT during their TB treatment *Denominator:* Total number of HIV-positive TB patients registered over the same given time period	Modified TB register or separate TB/HIV register	National, regional, district, facility	Continuous data collection. Quarterly reports	Core
Indicator C.4.1 Number of HIV-positive TB patients referred to HIV care and support services (as defined in local or national HIV/AIDS policy) during TB treatment, expressed as a proportion of the total number of HIV-positive TB patients.	*Numerator:* Number of HIV-positive TB patients, registered over a given time period, who are referred to HIV care and support services during their TB treatment. *Denominator:* Total number of HIV-positive TB patients registered over the same given time period	Modified TB register or separate TB/HIV register	National, regional, district, facility	Continuous data collection. Quarterly reports	Desirable
Indicator C.5.1 Number of HIV-positive registered TB patients who are started on ART or continue previously initiated ART, during or at the end of TB treatment, expressed as a proportion of all HIV-positive registered TB patients	*Numerator:* All HIV-positive TB patients, registered over a given time period, who receive ART (are started on or continue previously initiated ART) *Denominator:* All HIV-positive TB patients registered over the same given time period	Modified TB register, TB/HIV register or modified HIV care register	National, regional, district, facility	Continuous data collection. Quarterly reports	Core
Indicator D.1.1 National TB control policy, endorsed by government, addresses the link between TB and HIV, and the potential impact that HIV may have on TB control throughout the country.	Content analysis of national TB control policy matched against checklist of key components: • Recognition of impact of HIV on TB control • NACP included in NTP planning process • HIV surveillance in TB patients • TB IEC strategy that includes HIV information • TB training that includes HIV • Intensified TB case-finding for all PLWHA • ART for HIV-infected TB patients • TB patients to access continuum of care for PLWHA	NTP policy, national TB/HIV policy	National	Annual	Desirable (core for evaluation)

Note: Indicators highlighted in colour are considered core indicators for monitoring collaborative TB/HIV activities

Indicator and definition	What to measure	Data sources	Level	Periodicity	Status
Indicator D.1.2 National HIV/AIDS control policy, endorsed by government, addresses the link between TB and HIV, and the importance of TB as a major treatable and preventable cause of morbidity and mortality among PLWHA	Content analysis of national TB control policy matched against checklist of key components: • Recognition of impact of TB morbidity and mortality in PLWHA • NTP included in NACP planning process • HIV surveillance in TB patients • HIV IEC strategy that includes TB information • HIV training that includes TB • Intensified TB case-finding for all PLWHA • ART for HIV-infected TB patients • TB patients to access continuum of care for PLWHA • TB investigation and treatment part of basic package of care for PLWHA • IPT offered to all eligible PLWHA	NACP policy, national TB/HIV policy	National	Annual	Desirable (core for evaluation)
Indicator and definition	**What to measure**	**Data sources**	**Level**	**Periodicity**	**Status**
Indicator D.2.1 Number of potential partners in collaborative TB/HIV activities who are actively involved in the planning, implementation and monitoring of collaborative TB/HIV activities, expressed as a proportion of all potential partners	*Numerator:* Number of potential partners who are actively involved in the planning, implementation or monitoring of collaborative TB/HIV activities *Denominator:* The total number of potential partners in collaborative TB/HIV activities at national level	Analysis of TB, HIV and TB/HIV annual plans and policies, meeting minutes and key staff interviews	National	Annual	Desirable
Indicator D.3.1 Total funds that were available for collaborative TB/HIV activities in the most recently completed fiscal year, expressed as a percentage of the total funds budgeted for collaborative TB/HIV activities in the annual plan(s) of the same year	*Numerator:* Total funds that were available or allocated for collaborative TB/HIV activities from any source in the most recently completed fiscal year. *Denominator:* Total funds budgeted for collaborative TB/HIV activities in the annual TB, HIV and/or TB/HIV work plan(s) of the same fiscal year.	Annual plans and budgets of the NTP and NACP and/or TB/HIV annual plan and budget.	National	Annual	Desirable

Note: Indicators highlighted in colour are considered core indicators for monitoring collaborative TB/HIV activities

Stop TB Department
HIV/AIDS, Tuberculosis and Malaria

HIV/AIDS Department
HIV/AIDS, Tuberculosis and Malaria

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Website: http//www.who.int/gtb

For further information about tuberculosis
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