WHO-EM/STD/088/E
WHO-EM/TUB/247/E

An HIV/TB strategy for the Eastern Mediterranean Region 2006–2010

World Health Organization
Regional Office for the Eastern Mediterranean

WHO-EM/STD/088/E
WHO-EM/TUB/247/E

An HIV/TB strategy for the Eastern Mediterranean Region 2006–2010

World Health Organization
Regional Office for the Eastern Mediterranean
Cairo 2006

Design and layout by DAT
Printed by Metropole
Document WHO-EM/STD/088/E/02.06/1000
WHO-EM/TUB/247/E/02.06/1000

Contents

1. Introduction

The human immunodeficiency virus (HIV) pandemic presents a massive challenge to the control of tuberculosis (TB). Tuberculosis is one of the most common causes of morbidity and the leading cause of mortality in people living with HIV/AIDS (PLWHA). Although the state of the HIV epidemic in many countries in the Eastern Mediterranean Region is currently at a low level, it is increasing and in some countries is in a generalized state. Furthermore, there are a significant number of countries that have a high burden of tuberculosis in the Region. The challenge presented by the double burden of HIV/TB is therefore one which the Region should address in order to prevent the problem from escalating and reversing the successes so far achieved against tuberculosis.

There is a need for enhanced collaboration between existing HIV/AIDS programmes and tuberculosis programmes, in order to coordinate the response to HIV/TB, ensure a continuum of care for people with tuberculosis and HIV/AIDS, build on respective programme strengths and exploit synergies.

This strategy has therefore been developed by the WHO Regional Office for the Eastern Mediterranean to give guidance to countries in their response to the joint burden of HIV/TB. It is intended for ministries of health, national AIDS programme managers, national tuberculosis programme managers and other stakeholders, such as nongovernmental organizations, development agencies, donors, and people with tuberculosis and HIV/AIDS, and their communities.

The strategy builds on achievements made through the 3 by 5 Initiative, and draws on the *Interim policy on collaborative TB/HIV activities* (2004) [1], WHO's *Strategic framework to decrease the burden of TB/HIV* (2002) [2] and *Guidelines for implementing collaborative TB and HIV programme activities* (2003) [3]. In addition, it draws on WHO's *A guide to monitoring and evaluation for collaborative TB/HIV activities* (2004) [4] *and Guidelines for HIV surveillance among tuberculosis patients* (2004) [5].

2. Burden of disease

HIV/AIDS epidemiological situation

Worldwide, by the end of 2004, between 39.4 and 44 million people were estimated to be living with HIV/AIDS. Around 3.1 million people were estimated to have died from HIV/AIDS in 2004. In the Eastern Mediterranean Region, it is estimated that around 710 000 people are living with HIV/AIDS. The most affected country is Sudan with 512 000 cases. It is further estimated that in 2004 around 92 000 people were newly infected with HIV/AIDS in the Region and around 28 000 deaths due to HIV/AIDS occurred. Up to the end of 2004, 15 651 AIDS cases had been reported in the Region, 1254 of which were reported in 2003. However, information on HIV/AIDS epidemiology is still lacking in most countries. Most countries rely on HIV/AIDS case reporting.

Although HIV/AIDS in the Eastern Mediterranean Region may appear relatively modest when compared to other regions, this is due in part to under-reporting because of the stigma associated with the disease and the inadequacy of surveillance systems in many countries. This lack of adequate HIV/AIDS surveillance, including of high-risk populations and pregnant women, means there remains uncertainty about the extent of the epidemic in the Region.

However, the trend is on the rise, with three countries (Djibouti, Somalia and Sudan) experiencing generalized epidemics (HIV prevalence >1% in general adult population aged 15–45), accounting for the majority of estimated HIV infections in the Region. Other countries, such as the Islamic Republic of Iran and Pakistan have seen concentrated epidemics (HIV prevalence >5% among specific groups) among injecting drug users, while in Bahrain, Kuwait, Libyan Arab Jamahiriya, Morocco, Oman and Tunisia, HIV transmission among injecting drug users is increasing.

Tuberculosis epidemiological situation

Worldwide, 8 million new cases of tuberculosis are estimated to occur annually and there are an estimated 2 million deaths a year. Overall, one-third of the world's population is currently infected with the tuberculosis bacillus.

In the Eastern Mediterranean Region, tuberculosis is an important public health problem. Almost a third of the population are infected with *Mycobacterium tuberculosis*, with an estimated incidence of 122 per 100 000 population and an estimated mortality rate of 28 per 100 000. In 2004, 206 160 new cases were notified.

In 2004, there were 8 countries with a high burden of tuberculosis in the Region (estimated incidence more than 100 per 100 000 population). Of these, Afghanistan and Pakistan account for 12% and 44% respectively of the regional tuberculosis burden and are among the 22 countries in the global high burden group. The other high burden countries in the Region are Djibouti, Iraq, Morocco, Somalia, Sudan and Yemen. Five countries have an intermediate incidence rate (20 to 100 per 100 000 population) and nine countries have an estimated incidence lower than 20 per 100 000. While some

countries are showing a flattening trend or even a decline in the incidence of tuberculosis, Afghanistan, Somalia and Sudan are experiencing a continued increase.

The case detection rate is low in Afghanistan and Pakistan at 20%, but around 50% in the other countries. The regional treatment success rate is reasonably good at 81% and coverage has expanded to 80%, but is low in Afghanistan and Pakistan.

Another aspect of the resurgence of tuberculosis is the development of drug-resistant strains. These strains can be created by inconsistent and inadequate treatment practices that encourage bacteria to become tougher. The multidrug-resistant strains are much more difficult and costly to treat and multidrug-resistant tuberculosis (MDR-TB) is often fatal. Mortality rates of MDR-TB are comparable with those for tuberculosis in the days before the development of antibiotics.

HIV/TB epidemiological situation

It is estimated that one-third of all people living with HIV/AIDS worldwide are co-infected with TB. In countries where HIV is epidemic, the incidence of tuberculosis has drastically increased. The majority of people to date who are co-infected with HIV and tuberculosis live in sub-Saharan Africa.

In the Eastern Mediterranean Region, HIV seroprevalence among tuberculosis patients is generally low. This is primarily due to the low level of the HIV epidemic in most countries. However, in Djibouti, Somalia and Sudan, where HIV is at the level of a generalized epidemic, the situation is different: in one tuberculosis hospital in Somalia in 2002, HIV prevalence was 10%, while in another small study in a tuberculosis hospital in Djibouti it was 44%. Furthermore, there are signs that the rates of HIV infection among tuberculosis patients in the Region are on the rise [6]. By the end of 2000, it has been estimated that the number of co-infected adults (15–49) in the Region was 163 000 [7]. In 2001, the available data suggested that these rates stood at 23% in Djibouti, 8% in Sudan, 4.8% in Oman, 4.2% in the Islamic Republic of Iran, 2.1% in Pakistan, and 0.6% in Egypt. Although further studies are needed to assess the burden of HIV/TB in the Region, these figures suggest that unless action is taken to contain the HIV epidemic, tuberculosis incidence could dramatically increase.

3. Rationale for collaboration

Tuberculosis is a major cause of death among people living with HIV/AIDS. It is the most common treatable infectious HIV-related disease and the most common cause of death among people living with HIV/AIDS in countries that have a high burden of tuberculosis. Tuberculosis considerably shortens the survival of PLWHA.

HIV affects the immune system and increases the likelihood of people acquiring new tuberculosis infection. It also promotes both the progression of latent tuberculosis infection to active disease and recurrence of the disease in previously treated patients. HIV is fuelling the tuberculosis epidemic, particularly in sub-Saharan Africa, where 60%–80% of tuberculosis patients are co-infected with HIV in some countries.

Tuberculosis is often harder to diagnose and progresses faster in HIV-positive people. It occurs earlier in the course of HIV infection than many other opportunistic infections. People who are HIV-positive and infected with tuberculosis are up to 50 times more likely to develop active tuberculosis in a given year than people who are HIV-negative (5%–15% per year as opposed to 10% in a lifetime). Increasing tuberculosis cases in PLWHA increases the risk of tuberculosis transmission to the general population.

HIV is the main reason for failure to meet tuberculosis control targets in high HIV settings. While sub-Saharan Africa bears the brunt of the HIV-fuelled tuberculosis epidemic, the rapidly increasing HIV epidemic in other parts of the world could also increase the number of HIV-related tuberculosis cases. HIV and tuberculosis are so closely connected that the term “co-epidemic” or “dual epidemic” is often used to describe their relationship. Each disease speeds up the progress of the other, and the two diseases represent a deadly combination, since they are more destructive together than either disease is alone. A higher incidence of tuberculosis in people with HIV means increasingly stretched health services, higher mortality and morbidity rates, and lower treatment success rates.

Tackling HIV should therefore include tackling tuberculosis, while preventing tuberculosis should include treating HIV. Tuberculosis and HIV programmes share mutual concerns. HIV/AIDS treatment and care should be a priority for tuberculosis control, while prevention and care of tuberculosis should be a priority concern of national AIDS programmes. This requires systematic collaboration between national AIDS programmes and national tuberculosis programmes at every level. To reduce tuberculosis transmission, morbidity and mortality, while reducing HIV-related morbidity and mortality in high HIV prevalence populations, requires more effective delivery of available interventions by health sector providers, with increased population coverage. Tuberculosis and HIV/AIDS programmes need to exploit synergies in supporting health service providers to deliver these interventions. A unified health sector strategy to control HIV/TB is an integral part of the strategy for HIV/AIDS.

The vast majority of people infected with HIV are unaware of their HIV status and seek health care from general health services. Therefore tuberculosis and HIV programmes must strengthen the ability of general health service providers to respond to the health care needs of people with tuberculosis in populations with a high level of HIV prevalence. A coherent health response to HIV/TB incorporates tuberculosis control interventions as part of a comprehensive general health service response to HIV/AIDS.

4. Framework for collaborative action

Global and regional strategies and targets

There are a number of global and regional targets that seek to stimulate action to reduce the burdens of HIV/AIDS and tuberculosis. These provide a policy framework for collaborative HIV/TB action.

Traditionally, tuberculosis programmes and HIV/AIDS programmes have worked separately from each other. In the tuberculosis response, WHO is leading and coordinating global efforts to ensure that all tuberculosis patients worldwide have access to effective diagnosis and treatment. Similarly, WHO with its global partners, is playing a major role in introducing comprehensive prevention, care and treatment of HIV/AIDS, with a major aim of ensuring universal access to antiretroviral therapy for all those who need it.

Millennium Development Goals

Millennium Development Goal (MDG) 6 is to combat HIV/AIDS, malaria and other diseases. Target 7 of Goal 6 is to have halted and begun to reverse the spread of HIV/AIDS by 2015 and Target 8 is to have halted and begun to reverse (based on the 1991 figures) the incidence of tuberculosis by 2015.

WHO has the responsibility among UN agencies for strengthening the health sector response to HIV/AIDS by supporting countries in the implementation, integration and intensification of essential health sector interventions against HIV/AIDS. A priority is to promote effective HIV/AIDS surveillance.

Global tuberculosis control

The principal targets for global tuberculosis control are:

- to detect 70% of new smear-positive patients arising each year, and to successfully treat 85% of these patients by 2005;
- to have halted and begun to reverse incidence by 2015;
- to reduce tuberculosis prevalence and death rates by 50% between 1990 and 2015.

HIV/AIDS

The *WHO Global Health Sector Strategy for HIV/AIDS (2003–2007)* has set targets to:

- reduce HIV prevalence by 2005 among young people aged 15 to 24 in the most affected countries by 25%;
- reduce global HIV prevalence by 25% by 2010;
- ensure that at least 90% of young people aged 15–24 have access to youth-specific information, education and communication materials on HIV/AIDS, and that this has risen to at least 95% by 2010;
- reduce the proportion of infants infected with HIV by 20% by 2005, and by 50% by 2010.

In the Eastern Mediterranean Region, the goal of the regional strategic plan 2002–2005 was to strengthen the national health sector response to HIV/AIDS and sexually transmitted infections (STI) towards achieving a measurable impact on the progress of the HIV/AIDS and STI epidemics in the Region. A new strategic plan (2006–2010) will build on these achievements, while continuing to address the weak points in the regional response, with an added focus on access to treatment and care.

Building on the achievements of the 3 by 5 initiative

The WHO 3 by 5 Initiative aims to get 3 million people in developing and transitional countries on antiretroviral treatment (ART) by 2005. It is a step towards the goal of providing universal access to treatment. Regionally, the objective is to treat 70 000 PLWHA with ART by the end of 2005. This effort is focused on Djibouti, Egypt, Islamic Republic of Iran, Libyan Arab Jamahiriya, Pakistan, Somalia, Sudan and Yemen. The 3 by 5 Initiative builds on the experience of well-established tuberculosis control programmes. These programmes can, with additional support, contribute to systems of patient identification and ART delivery.

The DOTS strategy

In 1993, WHO declared the worldwide tuberculosis epidemic to be a global emergency and since 1996 has propagated a new strategy, called DOTS (directly observed treatment, short course), to combat the epidemic rapidly and in the most cost-effective way. The DOTS strategy is to identify and cure infectious tuberculosis cases among patients attending health services.

Countries in the Eastern Mediterranean Region have succeeded remarkably in the implementation of DOTS. By the end of 2003, 18 countries in the Region had introduced the DOTS strategy throughout the health services of their ministries of health, thereby achieving DOTS ALL OVER. The treatment success rate in DOTS areas is, on average, 81%, and the global target of 85% has almost been achieved. However, the DOTS case

detection rate in the Region has remained comparatively low at 28% in 2003. During recent years, slow expansion of DOTS coverage in two countries with a high burden of tuberculosis, Afghanistan and Pakistan, has been the main reason for the low DOTS case detection rate in the Region. Most recent reports from Pakistan indicate that the country will achieve full DOTS coverage by May 2005, which will add substantially to the regional case detection level.

DOTS aims at stopping the transmission of *Mycobacterium tuberculosis* infection, which is the final stage in the sequence of events by which HIV fuels the tuberculosis epidemic. The strategy for tuberculosis control in high HIV prevalence populations involves interventions against tuberculosis (intensified case-finding and cure, and tuberculosis preventive treatment) along with interventions against HIV (and therefore indirectly against tuberculosis) such as condoms, STI treatment, safe injecting drug use and ART. It is also important to complete DOTS expansion in Afghanistan and Pakistan and other countries, and to address a variety of challenges, including HIV/TB [8]. A regional strategic plan for strengthening health sector response to HIV/AIDS (2006–2015) was endorsed by the Regional Committee for the Eastern Mediterranean Region in September 2005 [9].

HIV/TB

The Global Working Group on TB/HIV, coordinated by WHO, is one of six working groups established under the auspices of STOP TB Partnerships [10,11]. It includes over 200 experts from over 40 countries including representatives from international agencies and donors. It has developed policy and guideline documents, the Interim Policy on Collaborative TB/HIV Activities being the leading one.

5. Elements of collaboration

The global direction on what should be done to address the dual tuberculosis and HIV epidemic is set out in the Interim Policy on Collaborative TB/HIV Activities [3]. This includes the identification of collaborative HIV/TB activities and the establishment of HIV/TB coordinating bodies to promote and coordinate the response of the two programmes at all levels.

HIV-positive people can easily be screened for tuberculosis; if they are infected they can be given prophylaxis with isoniazid to prevent development of the disease, or treatment with anti-TB drugs if they already have the disease. Tuberculosis patients can be offered an HIV test; indeed, research shows that tuberculosis patients are more likely to accept HIV testing than the general population. This means tuberculosis programmes can make a major contribution to identifying eligible candidates for ART and be an entry point.

In order to control tuberculosis in areas where HIV is prevalent, the DOTS strategy should be complemented by additional collaborative HIV/TB activities. These collaborative HIV/TB activities have the objectives of creating the mechanism of collaboration between tuberculosis and HIV/AIDS programmes, reducing the burden of tuberculosis among PLWHA and reducing the burden of HIV among tuberculosis patients. For many years efforts to tackle tuberculosis and HIV have been largely separate, despite the overlapping epidemiology. Improved collaboration between tuberculosis and HIV/AIDS programmes will lead to more effective control of tuberculosis among HIV-infected people and to significant public health gains. One example of collaboration that led to the development of a minimum package of policy documents and guidelines on TB/HIV was the ProTEST initiative started in 1999 to promote HIV testing and counselling among tuberculosis patients and screening of people infected with HIV for tuberculosis [12].

In the Eastern Mediterranean Region, collaboration is just beginning. Some countries have introduced HIV testing for tuberculosis patients and screening for tuberculosis infection and diseases among people with HIV/AIDS. Collaboration between the two programmes has happened at meetings and through the Country Coordinating Mechanism of the Global Fund to Fight AIDS, Tuberculosis and Malaria, but comprehensive systems are not generally in place. Possible interventions include HIV prevention, tuberculosis education and DOTS delivery to PLWHA, tuberculosis preventive therapy (isoniazid) for PLWHA and cotrimoxazole for other opportunistic infections. Other collaborative activities include testing and counselling for HIV and tuberculosis screening, and active case finding in congregate centres, such as prisons. Good tuberculosis and HIV surveillance systems are vitally important. Strengthening of operational research is also needed in order to identify and implement cost-effective activities to address HIV/TB.

6. Goal

The goal of the HIV/TB strategy for the Eastern Mediterranean Region is to:

- Reduce the burden of HIV in people living with tuberculosis

and

- Reduce the burden of tuberculosis in people living with HIV/AIDS.

7. Objectives

To achieve its goal, the HIV/TB strategy for the Eastern Mediterranean Region has four key objectives.

- By the end of 2007, all countries of the Eastern Mediterranean Region will have functional collaboration mechanisms between national AIDS programmes and national tuberculosis programmes.
- By the end of 2010, all countries of the Eastern Mediterranean Region will have functional surveillance of HIV/TB.
- By the end of 2010, all countries of the Eastern Mediterranean Region will have developed and implemented integrated packages of prevention and care for HIV and tuberculosis.
- By the end of 2010, all countries of the Eastern Mediterranean Region will have implemented plans for building sustained institutional and human capacity for an integrated HIV/TB response.

8. Strategies and interventions

Below are listed the collaborative strategies and interventions that should form part of the health sector response to HIV/TB.

Strategy one: support the establishment of HIV/TB coordinating mechanisms at country level. National HIV/TB coordinating mechanisms are needed to ensure effective collaboration between existing national AIDS programmes and national tuberculosis programmes at all levels. Interventions include the following.

- *A formal HIV/TB coordination body*. A mechanism is needed to coordinate the HIV/TB response between national AIDS programmes and national tuberculosis programmes in Ministries of Health, in close coordination with the Inter-Agency Coordinating Committees, Country Coordinating Mechanism and other coordination mechanisms.

- *Joint HIV/TB planning*. Joint strategic planning between national tuberculosis programmes and national AIDS programmes are needed to enable systematic and successful collaboration. The roles and responsibilities of each programme in implementing specific HIV/TB activities at national and local levels must be clearly defined.

- *Monitoring and evaluation*. It is important to monitor and evaluate HIV/TB activities to assess their quality, effectiveness, coverage and delivery. This allows continuous improvement of programme performance. It will involve collaboration between tuberculosis programmes, HIV/AIDS programmes and general health services, including the development of referral linkages. These can be integrated within existing monitoring and evaluation systems and should ensure confidentiality. A core set of indicators and data collection tools should be agreed on.

- *Resources mobilization for collaborative HIV/TB activities*. Additional resources, including funds and human resources, may be needed to support joint HIV/TB activities. In this case, joint proposals to obtain resources for HIV/TB activities are required, depending on the specific needs of each country. HIV/TB coordinating mechanisms will also help avoid competition for the same resources.

- *Advocacy and public awareness-raising activities about HIV/TB*. Advocacy on HIV/TB is very important for ensuring political commitment and influencing policy development, programme implementation and resources mobilization. Raising public awareness about HIV/TB is important for achieving the social mobilization necessary to secure public and political support for HIV/TB activities, and to encourage the participation of patients in them.

- *Community involvement in joint HIV/TB activities*. It is important to expand HIV/TB activities beyond the health sector by involving communities. This includes support groups and community-based organizations for people with tuberculosis and PLWHA, who can be involved in the advocacy and implementation of HIV/TB activities, including identification of individuals who need tuberculosis treatment or isoniazid preventive therapy.

- *Support operational research in the field of HIV/TB*. Operational research can help develop the evidence bases for the most effective and efficient ways of implementing HIV/TB activities. Research activities include HIV/TB operational research on country-specific issues, baseline assessment studies, basic science research and clinical trials for HIV/TB diagnostic tools and therapies, and the description of process and outputs of HIV/TB activities,

including innovative approaches, and the documentation and dissemination of good practices as a way to share experiences. The sharing of experiences in HIV/TB collaborative activities within and between countries is essential for the development of models of good practice that can be adapted to country and local contexts.

Strategy two: support national HIV surveillance among tuberculosis patients and tuberculosis case notification among PLWHA, and establish and maintain a regional database. Surveillance is essential for programme planning and implementation. Surveillance could include periodic surveys, sentinel methods and data from routine care. The method chosen will depend on the state of the HIV and tuberculosis epidemics, and the availability of resources and expertise. Interventions include the following:

- *HIV surveillance among tuberculosis patients in all countries irrespective of HIV prevalence.* This could include:
  - HIV testing and counselling offered to all tuberculosis patients as the basis of surveillance in all countries in a state of generalized HIV epidemic;
  - HIV testing and counselling offered to all tuberculosis patients in areas of concentrated HIV epidemic as the basis of surveillance in all countries in a state of concentrated HIV epidemic;
  - periodic or sentinel surveys in countries with a low level of HIV epidemic;
  - periodic or sentinel surveys to assess the HIV prevalence rate among tuberculosis patients where unknown.
- *Notification of tuberculosis cases and tuberculosis treatment outcomes among PLWHA.*

Strategy three: support the implementation of integrated prevention, care and treatment packages for tuberculosis and HIV patients. The main component of a collaborative HIV/TB response is integrated tuberculosis and HIV prevention, and treatment and care for HIV positive tuberculosis patients. Interventions include the following:

- *Increase HIV case detection among tuberculosis patients*. Most HIV-infected people are unaware of their HIV status. HIV testing and counselling can offer an entry point for HIV/AIDS prevention, care and support. Measures to ensure informed consent and confidentiality should be put in place and HIV testing and counselling made readily available to tuberculosis patients in general health settings, TB clinics, or through referral to HIV/AIDS services.
- *Increase tuberculosis case detection among people with HIV/AIDS*. This involves screening for symptoms and signs of tuberculosis in people with HIV/AIDS, household contacts, groups at high risk for HIV and settings where HIV-infected people are concentrated, such as prisons and HIV/AIDS services. Early diagnosis and treatment of tuberculosis increases chances of survival, improves quality of life and reduces transmission. Voluntary counselling and testing (VCT) services can serve as an entry point for tuberculosis detection. Referral linkages should be established between HIV counselling and testing services and tuberculosis diagnostic and treatment services.
- *Provide integrated case management and treatment including antiretroviral therapy (ART) and DOTS*. People living with HIV/AIDS, including those infected with tuberculosis, should be provided with treatment, care and support services. This includes DOTS and ART. ART greatly improves the survival chances and quality of life for people living

with HIV/AIDS. It can also serve as an incentive for people to be tested for HIV. It demands high adherence rates to achieve maximum benefits and minimize the development of drug resistance. ART should be provided to HIV-infected tuberculosis patients, depending on eligibility criteria in each country and any possible drug interactions. DOTS can be used as a model for scaling up access to ART in resource limited areas with poor infrastructure and logistics.

- *Provide integrated patient education, counselling and other measures to reduce HIV transmission*. This can include the promotion of safer sexual and drug use practices, screening and treatment of sexually transmitted infections (STI), prevention of vertical transmission by providing antiretroviral drugs to pregnant women, and ensuring safety of the blood supply and use of sterilized medical equipment. Tuberculosis programmes should develop HIV prevention interventions for their patients or establish referral linkages with HIV/AIDS services.

- *Introduce isoniazid preventive therapy (IPT) for HIV-positive tuberculosis patients*. Isoniazid prevents progression of latent tuberculosis to active disease. Use of antiretroviral drugs does not preclude its use. It is vitally important to exclude active tuberculosis before therapy is started. HIV/AIDS services should provide IPT to people with HIV/AIDS once active tuberculosis is safely excluded. Information should be provided about IPT to people with HIV/AIDS.

- *Introduce cotrimoxazole preventive therapy (CPT) for HIV-positive tuberculosis patients*. Cotrimoxazole is used for the prevention of secondary infections in eligible PLWHA, including tuberculosis patients. It has been shown to reduce mortality. HIV/AIDS services should provide CPT to eligible PLWHA who have active tuberculosis. Information should be provided about CPT to PLWHA.

- *Introduce infection control measures for both tuberculosis and HIV in health care settings*. In health care and congregate settings such as prisons where people with tuberculosis and HIV/AIDS are often crowded together, the possibility of tuberculosis transmission is increased. Administrative, environmental and personal protection measures are required to reduce transmission including those that reduce exposure of health workers, prison staff, their clients and any others present in the settings to infection. These include the early recognition, diagnosis and treatment of tuberculosis, and the separation of those with suspected pulmonary tuberculosis from others until diagnosis is confirmed or excluded. Increasing natural ventilation, use of ultraviolet irradiation (where applicable), removal of HIV-infected people from potential sites of exposure to tuberculosis, and providing IPT are other possible interventions.

- *Establish referral networks*. Referral linkages between tuberculosis and HIV/AIDS services enable the provision of a continuum of care and support for people living with HIV/AIDS who are receiving or have completed treatment for tuberculosis.

Strategy four: support regional and national capacity building. Joint HIV/TB capacity building is needed to ensure health services can meet the demands of HIV/TB activities. Interventions include the following:

- *Building capacity in health care delivery for joint HIV/TB activities*. This includes laboratory, drug and referral capacity.
- *Building capacity in programme management*. This includes joint planning, monitoring and evaluation, resource mobilization.
- *Joint HIV/TB training plans*. This includes joint training plans for pre-service, in-service and continuing medical education on collaborative HIV/TB activities for all health staff.
- *Establishing networks and pools of technical experts*. Regional experts can be identified and supported to provide technical support in various HIV/TB areas to the countries of the Region.

9. Country level activities

Objective 1: By the end of 2007, all countries of the Region will have functional collaboration mechanisms between national AIDS programmes and national tuberculosis programmes and also with other stakeholders

- Establish an HIV/TB activities coordinating body that is effective at all levels.
- Develop evidence-based national plans for the national HIV/TB response and conduct monitoring and evaluation of the response to the HIV/TB epidemic.
- Mobilize resources for national HIV/TB response.
- Conduct advocacy activities to raise political commitment and to mobilize communities to take part in the response.
- Ensure the participation of community members (tuberculosis patients and PLWHA) in joint HIV/TB activities.
- Oversee HIV and tuberculosis surveillance activities and collect information for building evidence.
- Identify needs, plan and coordinate capacity building and resource development to ensure national coverage.

Objective 2: By the end of 2010, all countries of the Region will have developed and implemented integrated packages of prevention and care for HIV/AIDS and tuberculosis

- Introduce HIV testing and counselling services to the operations of tuberculosis programmes, or establish links with HIV/AIDS programmes to fulfil that purpose.
- Develop and introduce intensified tuberculosis case-finding activities in HIV/AIDS testing and counselling services and in treatment and care centres and other HIV and tuberculosis focus settings.

- Establish links between HIV/AIDS and tuberculosis programmes to ensure adequate treatment, including DOTS, for people co-infected with HIV and TB.
- Ensure a continuum of ART, care and support for PLWHA who are receiving or have completed their tuberculosis treatment.
- Undertake a broad range of HIV/AIDS/STI prevention activities and injecting drug use harm reduction in tuberculosis programmes and establish links with HIV/AIDS/STI programmes to fulfil that purpose.
- Introduce isoniazid preventive therapy in HIV/AIDS services and ensure patient education about it.
- Ensure the provision of cotrimoxazole preventive therapy through HIV/AIDS programmes to eligible PLWHA with smear-positive tuberculosis.
- Ensure tuberculosis and HIV infection control in health care and congregate settings.
- Establish referral systems between HIV testing and counselling services and tuberculosis treatment and diagnostic services.

Objective 3: By the end of 2010, all countries of the Eastern Mediterranean Region will have functional surveillance of HIV/TB

- Conduct HIV surveillance activities (sentinel and seroprevalence studies) among tuberculosis patients.
- Ensure adequate tuberculosis case notification and treatment outcome notification among PLWHA diagnosed with tuberculosis.

Objective 4: By the end of 2010, all countries of the Eastern Mediterranean Region will have implemented plans for building sustained institutional and human capacity for an integrated HIV/TB response

- Develop joint capacity building plans for the tuberculosis and HIV/AIDS programmes to ensure adequate capacity in health care delivery for undertaking joint HIV/TB activities.
- Ensure the provision of pre-service and in-service training in different areas of HIV/TB response activities including laboratory, drugs and other support activities.
- Develop the mechanisms that ensure continued follow-up of capacity-building efforts and of trainees for quality assurance and continuing education.

10. Monitoring and evaluation

While collaborative HIV/TB activities contribute to achieving HIV/AIDS and tuberculosis targets, there is not sufficient evidence to be able to show exactly how and to what degree they contribute. Therefore indicators and targets for HIV/TB should relate to the coverage and implementation of collaborative HIV/TB activities rather than to HIV/AIDS and tuberculosis rates (Table 1).

Table 1. Indicators for HIV/TB collaborative activities

Programme area	Country level indicators	Regional indicators
Functional collaborative mechanisms	HIV/TB coordinating mechanisms established with representatives of major stakeholders in the tuberculosis and HIV response	Number of countries who have established functional collaborative mechanisms
	Joint HIV/TB work plans developed for advocacy, awareness-raising, prevention and care, surveillance and capacity-building	Number of countries with clear endorsed policies on HIV/TB co-infection response Number of countries with integrated monitoring and evaluation plans developed
	Integrated monitoring and evaluation plans developed	Number of countries with resources available for collaborative HIV/TB work
	Joint resource mobilization activities implemented	Available funds as a percentage of needed funds (planned) for HIV/TB collaborative activities
	Available funds as a percentage of needed funds (planned) for HIV/TB collaborative activities Declared commitment (by the political authorities) to address the links between HIV and tuberculosis	Number of countries with declared commitment to address the links between HIV and tuberculosis
	Percentage of tuberculosis facilities providing on-site or referral to HIV testing and counselling services out of all existent tuberculosis services	Number of countries with HIV testing and counselling services established or referred to within tuberculosis service facilities
Implementation of integrated HIV/TB prevention and care packages	Percentage of PLWHA screened for tuberculosis of all identified HIV/AIDS cases	Regional percentage of PLWHA screened for tuberculosis of all identified HIV/AIDS cases
	Total number of persons with HIV and total number of persons newly diagnosed with HIV within tuberculosis service facilities and proportion of those referred to HIV care and support services including ART	Regional number of persons with HIV and total number of persons newly diagnosed with HIV within tuberculosis service facilities and proportion of those referred to HIV care and support services including ART
	Proportion of tuberculosis patients with HIV who receive ART out of all those known to need it	Proportion of tuberculosis patients with HIV who receive ART out of all those estimated to need it
	Total number of tuberculosis cases and of persons newly diagnosed with TB within HIV service facilities	Regional number of tuberculosis cases and of persons newly diagnosed with TB within HIV service facilities

Programme area	Country level indicators	Regional indicators
	Proportion of HIV/TB co-infected patients receiving CPT during their tuberculosis treatment or provided with IPT if tuberculosis is latent Information, education and prevention materials related to both diseases and co-infection with HIV and tuberculosis are developed and distributed at service level	Number of countries that have introduced CPT and IPT Information, education and prevention materials related to both diseases and co-infection with HIV and tuberculosis are developed and distributed to countries
Functional HIV/TB surveillance	Number of HIV sero-surveillance sentinel sites established within tuberculosis services as a proportion of planned Proportion of districts/ governorates/ zones covered by HIV/TB sentinel surveillance Proportion of districts/ governorates/ zones reporting HIV/TB co-infection	Number of countries that have implemented sentinel sero-surveillance for HIV/TB Number of countries that report HIV/TB co-infection
Capacity building	National capacity-building plan for HIV/TB response developed	Number of countries implementing national HIV/TB capacity-building plans

11. Role of WHO

Developing effective collaboration between HIV/AIDS control and tuberculosis control is a priority for WHO. In addition to its ongoing support to HIV/AIDS control and tuberculosis control, WHO will support countries in developing effective HIV/TB joint action by strengthening national capacity to implement collaborative HIV/TB activities. Specifically, in the Eastern Mediterranean Region, WHO will:

- provide strategic guidance adapted to the specificities of the Region;
- adapt global tools for regional use or develop new ones in response to country needs;
- develop regional partnerships with key stakeholders including donors;
- support countries in developing national strategies for HIV/TB collaborative activities;
- support countries in resource mobilization for the implementation of HIV/TB collaborative activities;
- provide country-specific technical support based on country needs;
- organize regional capacity building events and facilitate the participation of countries in global capacity-building opportunities;
- provide technical support in surveillance, research, and monitoring and evaluation.

References

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 implementing collaborative TB and HIV programme activities*. Geneva, World Health Organization, 2003 (WHO/CDS/TB/2003.319, WHO/HIV/2003.01).

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

4 *A guide to monitoring and evaluation for collaborative TB/HIV activities*. Geneva, World Health Organization, 2004 (WHO/HTM/TB/2004.242).

5 *Guidelines for HIV surveillance among tuberculosis patients. Second edition*. Geneva, World Health Organization, 2004 (WHO/HTM/TB/2004.339).

6 Gillini L and Seita A. Tuberculosis and HIV in the Eastern Mediterranean Region. *Eastern Mediterranean Health Journal*, 2002, 8(6): 699–705.

7 *TB/HIV: A Clinical Manual*. 2nd edition. Geneva, World Health Organization, 2004 (WHO/HTM/TB/2004.329).

8 *An expanded DOTS framework for effective tuberculosis control*. Geneva, World Health Organization, 2002 (WHO/CDS/TB/2002.297).

9 *Strengthening health sector response to HIV/AIDS and sexually transmitted diseases in the WHO Eastern Mediterranean Region 2006–2010*. Cairo, World Health Organization, Regional Office for the Eastern Mediterranean, 2005.

10 *Report of the Third TB/HIV Working Group Meeting, 4–6 June 2003, Montreux*. Geneva, World Health Organization, 2003 (WHO/CDS/TB/2003.327).

11 *Report of the Fourth TB/HIV Working Group Meeting, 20-21 September 2004, Addis Ababa*. Ethiopia, World Health Organization, 2003 (WHO/HTM/TB/2005.348).

12 *Second Meeting of the Global Working Group on TB/HIV: 14–16 June 2002, Durban*, South Africa. Geneva, World Health Organization, 2002 (WHO/CDS/TB/2002.311).

Annex 1. HIV/TB activities according to HIV epidemic level

Countries should implement the minimum collaborative HIV/TB interventions recommended depending on their HIV prevalence rates as outlined in the table below. While HIV prevalence among tuberculosis patients is the most reliable indicator of the stage of the HIV/TB epidemic in a country, in the absence of this data, national adult HIV prevalence rates can be used instead. However, it should be noted that this will underestimate HIV prevalence rates in groups at high risk for HIV and in certain areas within countries. Consequently, countries should take regional variations in HIV prevalence into consideration and countries with low prevalence rates should focus as a priority on groups at high risk for HIV and tuberculosis. These may include injecting drug users, sex workers and people in congregate settings such as prisons.

Recommended minimum collaborative HIV/TB activities according to HIV epidemic level [3]

Category	Criteria	Recommended collaborative TB/HIV activities
I	Countries in which the national adult HIV prevalence rate is ≥ 1% OR In which the national HIV prevalence among tuberculosis patients is ≥ 5%	**A. Establish the mechanisms for collaboration** A.1 Set up a coordinating body for TB/HIV activities effective at all levels A.2 Conduct surveillance of HIV prevalence among tuberculosis patients A.3 Carry out joint TB/HIV planning A.4 Conduct monitoring and evaluation **B. Decrease the burden of tuberculosis in people living with HIV/AIDS** B.1 Establish intensified tuberculosis case-finding B.2 Introduce isoniazid preventive therapy B.3 Ensure tuberculosis infection control in health care and congregate settings **C. Decrease the burden of HIV in tuberculosis patients** C.1 Provide HIV testing and counselling C.2 Introduce HIV prevention methods C.3 Introduce co-immoxazole preventive therapy C.4 Ensure HIV/AIDS care and support C.5 Introduce antiretroviral therapy

Category	Criteria	Recommended collaborative TB/HIV activities
II	Countries in which the national adult HIV prevalence rate is below 1% AND in which there are administrative areas with an adult HIV prevalence rate of ≥ 1%	Administrative areas with ≥ 1% adult HIV prevalence: Implementation of all activities as in category I countries in the administrative areas identified Other parts of the country: implementation of activities as in category III countries
III	Countries in which the national adult HIV prevalence rate is below 1% AND in which there are no administrative areas with an adult HIV prevalence rate of ≥ 1%	**A. Joint national TB/HIV planning to implement:** A.2 Conduct surveillance of HIV prevalence among tuberculosis patients **B. To decrease the burden of tuberculosis in people living with HIV/AIDS** *[with focus on groups at high risk for HIV and tuberculosis risk, e.g. injecting drug users, sex workers and those living in congregate settings]* B.1 Establish intensified tuberculosis case-finding B.2 Introduce isoniazid preventive therapy B.3 Ensure tuberculosis infection control in health care and congregate settings

For more informations
Please contact

Division of Communicable Disease Control
World Health Organization
Regional Office for the Eastern Mediterranean

Address: Abdul Razzak Al Sanhouri St.,
P.O. Box 7608 Nasr City. Cairo 11371, Egypt.
Tel.: (202) 670 2535 Fax.: (202) 670 2492/4
e-mail: asd@emro.who.int
web sites: www.emro.who.int/asd