



THE INTEGRATED APPROACH

# Handbook on HIV/TB integration at the Workplace





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**HIV/TB integration  
at the Workplace**





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## LIST OF ABBREVIATIONS

AIDS	Acquired Immune Deficiency Syndrome
ARV	Anti-retroviral Therapy
DOT S	Directly Observed Treatment Short-course
HIV	Human Immunodeficiency Virus
HTC	HIV Testing and Counselling
ILO	International Labour Organization
MDR	Multi-drug Resistant
NTP	National TB Programme
PLHIV	People Living with HIV
TB	Tuberculosis
UNAIDS	Joint United Nations Programme on HIV & AIDS
VCT	Voluntary Counselling and Testing
WHO	World Health Organization

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## BACKGROUND

### Introduction

The value of good health to any economy can never be overstated. Disease greatly affects the productivity of the workforce while also diverting resources for development and investment to seeking for treatment among other cascading effects. In the advent of the HIV and AIDS pandemic, the challenge is even greater. When the epidemic first hit, returning to work after diagnosis just did not happen. This was due to the fact that there were no early detection HIV tests to facilitate early intervention. Diagnosis was only after presentation, those with the virus presented with the gravest opportunistic infection due to a destroyed immune system. These people were too sick to work and sadly died soon after diagnosis. This greatly affected the development stride that had been made by countries, businesses and individuals.

The effect of HIV on the immune system led to resurgence of other infections in form of opportunistic infection with the most common being Tuberculosis (TB). TB is a major cause

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of death among people living with HIV (PLHIV). The development of active TB accelerates the progression of disease towards full-blown AIDS. The co-infection of HIV-TB is on the rise and greatly complicates HIV management. TB treatment has also faced challenges with the emergence of resistant strains of the bacteria making it very expensive to treat. This has necessitated the need for an integrated approach to addressing HIV and TB for effective management.

Morbidity and mortality from HIV and AIDS and TB negatively affect socioeconomic conditions, particularly life expectancy, productivity, and availability of skilled labor. For many workplaces, these conditions increase employee absenteeism, medical expenses, and the costs of replacing and training employees, which has an adverse impact on the bottom-line, production costs, service delivery, and overall mission. With this realization, the International Labour Organization (ILO) piloted a project on an integrated approach to workplace programmes on HIV, AIDS and TB. This is an information booklet for workplaces to empower them in their role as behaviour change platforms by

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providing a one-stop-shop for all the relevant information on HIV, AIDS and TB in the workplace.



## HIV, AIDS and Tuberculosis: The Kenyan Situation

Kenya's HIV epidemic has been categorized as generalized; meaning that HIV affects all sectors of the population. It remains a major challenge as it is one of the greatest public health concerns. Current statistics on HIV and AIDS as per the Kenya Demographic and Health Survey (2008/9) are as follows:

- Approximately 1.4 million Kenyans living with HIV
- Prevalence among 15 – 49 years is 6.3% with more women (8.0%) infected than men (4.3%).

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- Discordant couples stand at 6%
  - HIV among married couples is 7%
  - HIV testing is at 50% (KDHS, 2008/9)

According to the Ministry of Public Health and Sanitation, Kenya has a large and rising TB disease burden and is ranked among the twenty-two countries that collectively contribute about 80% of the world's TB cases. The statistics of TB in Kenya are as follows:

- The number of reported TB cases had increased - 11,625 in 1990, 116,723 cases in 2007 and declined to 106,083 in 2010
- In the last 10 yrs TB cases have increased by about 4% annually but in the last 5 years, there has been an annual decrease of about 2%.
- Approximately about 50% of TB patients were HIV positive in 2010.

The contributing factors to the increase of both HIV and TB disease burden in Kenya are social, economic, environmental, institutional, biological and cultural. (MoPHS, 2010)

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## HIV AND AIDS

### What are HIV and AIDS?

**H**IV stands for Human Immunodeficiency Virus. It is a virus that attacks the human immune system particularly the white blood cells known as the CD4. This weakens the immune system which becomes unable to protect the body against infection and diseases. When the immune system is destroyed by HIV and the body is unable to fight off disease, then AIDS - Acquired Immune Deficiency Syndrome sets in. This is the later stage of the HIV infection that is characterized by various diseases known as opportunistic infections. People do not actually die from AIDS; they die from the opportunistic diseases that may take hold when their immune system has been compromised.

### How is HIV transmitted?

HIV can be transmitted through the following means:

- Sexual transmission - unprotected heterosexual and

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homosexual intercourse through the seminal fluid from men and Vaginal fluids in women

- Blood and blood products - blood transfusion, organ transplant, unsterile surgical and injection equipment and sharing syringes among drug users
- Mother to child transmission - during pregnancy, at delivery and through breast-feeding

HIV can only be transmitted from one human to another when there is contact with bodily fluids from an infected person. Body fluids like saliva do not contain enough of the virus to infect another person. It is important to remember that at least one of the people has to have HIV for there to be any risk of infection.

### **How can we prevent the transmission of HIV?**

- Abstinence from sex
- Use of a condom during sex
- Being faithful to one sexual partner who is also faithful
- Using of properly screened blood and blood products
- Uptake of Prevention of Mother to Child Treatment

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- (PMTCT) for pregnant mothers who are HIV positive
- Avoid sharing needles for intravenous drug use
  - Voluntary Medical Male Circumcision (VMMC)
  - Knowledge of HIV status through HIV Testing and Counseling (HTC)
  - Treatment for Prevention particularly for discordant couples
  - Antiretroviral Therapy
  - Prevention with Positives
  - Prevent medical transmission through sterilization of medical equipment
  - Post Exposure Prophylaxis (PEP)
  - Use of universal precautions for healthcare workers
  - Prevent occupational transmission at the workplace

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## TUBERCULOSIS (TB)

### What is tuberculosis?

**T**B is a chronic infectious disease caused by *Mycobacterium tuberculosis* that affects all parts of the body except the teeth, hair and nails. The bacillus was isolated on March 24, 1882 by Robert Koch who received the Nobel Prize for this discovery. There are two types of TB:

1. Pulmonary TB – found in the lungs; it is the most common type of TB that usually manifests with a persistent cough of more than two weeks.
2. Extra-pulmonary TB – TB found outside the pulmonary system and affects all other body parts except the hair, nails and teeth.

### Is TB a threat?

TB is a growing global concern due to the increasing



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number of people infected. The pattern of increase is greatest in the areas of the world with high HIV prevalence. Some of the reasons TB is seen as a threat are as follows:

1. 1/3 world population have TB bacteria but most never develop active disease
2. Kenya is 13th on World Health Organization (WHO) list of the 22 high-burden TB countries
3. Highly infectious as it is easily spread through droplet infection - as an infected person coughs, sneezes, laughs and speaks
4. Affects all ages with the very young and very old being most vulnerable
5. 10% of the population develop TB in their life time but this is increasing due to HIV
6. Drug resistance is on the increase making treatment complicated and very expensive (WHO, 2010)

### **How does TB infection occur?**

When a person breathes in TB bacteria, the bacteria can settle in the lungs and begin to grow. From there, the



bacteria can move through the blood to other parts of the body, such as the kidney, spine, and brain. TB in the lungs or throat can be infectious but TB in other parts of the body, such as the kidney or spine, is usually not infectious. However, not everyone infected with TB becomes sick. People who are not sick have what is called latent TB infection; they do not feel sick, no symptoms and do not spread TB to others. Some people with latent TB infection later develop the active TB disease. People with active TB

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disease are most likely to spread it to people they spend prolonged time with every day, such as family members, friends, and coworkers.

## How is TB Transmitted?

TB is transmitted mainly when a person breaths in infectious droplets produced by persons with pulmonary TB during coughing, laughing, shouting or sneezing. TB is not spread through sharing utensils, personal items or shaking hands.

## What are the Signs and Symptoms of TB?

- A productive, prolonged cough for more than three weeks
- Pain in the chest that can be felt when inhaling or exhaling
- Coughing up blood or sputum (phlegm from deep inside the lungs)
- Fever and drenching night sweats
- Appetite loss and loss of weight

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- Production of sputum that may be blood stained (haemoptysis)
  - Weakness or fatigue
  - Chills (usually severe and repetitive)

## How is TB Treated?

TB is curable especially when diagnosed early and the patient adhere to the treatment regime. The treatment for new cases it takes 6 months while that for recurring TB take 8 months. TB can usually be treated with a course of four standard or first-line anti-TB drugs used in combination taken in two phases intensive and maintenance phase. When TB drugs are misused or mismanaged, drug resistance may occur. There are two types of drug resistant TB:

### 1. Multi-drug resistant TB (MDR-TB)

This results when the patient is resistant to two of the first line drugs. This results in a strain that is hard to treat. MDR-TB takes longer to treat with second-line drugs, which are more

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expensive and have more side-effects. Someone with MDR-TB transmits the same to others.

## 2. Extensively-drug resistant TB (XDR-TB)

This is the most dangerous form of TB. It can develop when the second-line drugs are misused or mismanaged making them ineffective. Because XDR-TB is resistant to first- and second-line drugs, treatment options are seriously limited and very expensive.

Once on treatment, for most cases the person stops being infective within two weeks meaning they cannot spread the disease even if they are still coughing. In Kenya, treatment for TB is offered free of charge at any public health facility.

### What is the DOTS Strategy?

DOTS is Directly Observed Treatment Short-course. This is a strategy employed to ensure adherence to TB treatment. It involves observing the patients as they take their medication among others. Implementation of DOTS has 5

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components as shown in the table below. This can be implemented at a health facility level or even at the workplace.



DOTs Components	Method	Why it is important in the workplace
Political/Top management commitment	Government/Senior management accord priority for TB control	Only strong commitment can truly ensure that sufficient resources are mobilized and sustained over time
Good quality diagnosis	Relies primarily on sputum smear for patients at health facilities	-Early detection to prevent spread -Inability to diagnose promptly & accurately – prolonged illness, treatment failure, development of MDR/XDR
Good quality drugs	Establish guaranteed uninterrupted supply of drugs	To avoid treatment interruption, development of MDR/XDR
Short-course chemotherapy given under direct observation	Health worker/trained person not family to watch patient as they swallow drugs	Avoid non-adherence, treatment failure & development of MDR/XDR
Systematic monitoring & accountability	Monitoring of treatment progress & outcome Evaluation of programme performance	M&E is essential for quality control & sustained improvement

## Who is at risk of TB?

Due to the mode of transmission everybody is at risk of TB infection. This is because we breathe in the *Mycobacterium tuberculosis bacilli*, this settles in the lungs but does not cause disease unless circumstances are favourable such as

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the following:

- HIV infection which lowers immunity
- Low immunity caused by other factors such as organ transplants, diabetes, kidney failure
- The very young and very old due to still developing and weakening immune system respectively
- Malnutrition
- Working and living in poorly ventilated enclosed rooms
- Close and continuous contact with a person with active TB
- People working in mining and especially with silica dust that causes silicosis



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## HIV-TB INTERRELATIONSHIP

### What is the relationship between TB and HIV?

In Kenya TB is managed from birth when the baby is given the BCG immunization which is able to confer some protection to the person even into adulthood. Those infected with HIV have a weakened immune system making them prone to infection with TB than those who are HIV negative. It is the most common opportunistic infection among PLHIV and the leading cause of HIV-related illness and leading cause of death with about 1/3 of all AIDS related deaths. This relationship is the justification for addressing HIV and TB together for effective outcomes.

### How can HIV and TB be managed together?

1. Establish mechanisms for collaboration between TB and HIV programs through the following ways:
  - Set up a coordinating body for TB/HIV activities at all levels - National, Province and Districts

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- Conduct surveillance of HIV prevalence amongst TB patients and vice versa
  - Carry out joint TB/HIV planning, implementation, monitoring and evaluation
2. Decrease the burden of TB in PLHIV by:
- Intensifying case finding of co-infections of TB-HIV
  - Introduce Isoniazid Preventive Therapy (IPT) to those exposed to TB
  - Ensure TB infection control in health care and congregate settings (WHO, 2009)
3. Decrease the burden of HIV amongst TB patients by:
- Providing HIV testing and counselling using the Diagnostic Testing and counselling (DTC) for all TB patients
  - Introduce HIV prevention methods
  - Introduce Co-trimoxazole Preventive Therapy (CPT) to prevent a broad spectrum of bacterial infections.
  - Ensure HIV and AIDS care and support
  - Introduce anti-retroviral therapy (ART)

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## Policy for collaborative TB/HIV activities

### A. Establish the mechanism for collaboration

#### JOINT HIV AND TB

- A.1. TB/HIV coordinating bodies
- A.2. HIV surveillance among TB patient
- A.3. TB/HIV planning
- A.4. TB/HIV monitoring and evaluation

### B. To decrease the burden of TB in PLHIV - Three Is

#### HIV PROGRAMME

- B.1. Intensified TB case finding
- B.2. Isoniazid preventive therapy
- B.3. TB infection control in health care and other settings

### C. To decrease the burden of HIV in TB patients

#### TB PROGRAMME

- C.1. HIV testing and counselling
- C.2. HIV preventive methods
- C.3. Cotrimoxazole preventive therapy
- C.4. HIV/AIDS care and support
- C.5. Antiretroviral therapy to TB patients

WHO 2004



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## WORKPLACE INTEGRATED PROGRAMMING

### Why integrate HIV and TB programs at the workplace?

The rationale of HIV and AIDS workplace programme is to mitigate the negative impact of HIV and AIDS on workplaces. According to the ILO recommendations concerning HIV and AIDS and the world of work 2010, No. 200, workers should benefit from programmes to prevent specific risks of occupational transmission of HIV and related transmissible diseases such as TB.

The impact of TB on the workforce includes the following:

- Increased rate of absenteeism resulting in loss of man hours
- Lowered productivity and employee production capacity
- Increased direct cost related to treatment and care and other indirect costs

This is the same impact HIV and AIDS has on the workforce. The need to integrate TB and HIV is both urgent and logical,

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mainly due to the close interaction between TB and HIV as well as the increasing and compelling evidence of the benefits of effective integration. HIV and TB have many common features in terms of disease burden, epidemiological contexts and the recommended strategic activities for their control. The impact on PLHIV cannot be ignored due to the following facts:

- TB is responsible for 23% of all HIV-related deaths in developing countries
- The low immunity predisposes PLHIV to between 40 – 60% chances of getting TB.
- TB shortens the lifespan of PLHIV

Mitigating HIV without considering the impact of TB slowly erodes the progress made in the HIV and AIDS workplace programmes. Actively managing TB at the workplace through early diagnosis and treatment ensures that workers are able to return to work within 2 – 4 weeks without risking the danger of infecting others both at work and home. Both TB and HIV control form important indicators of Millennium Development Goal (MDG) 6 that seeks to combat HIV, TB,

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Malaria and other infectious diseases. An integrated approach to management increases the chances of meeting the set goal. Employers can play a vital role in promoting and undertaking TB control activities in the workplace and in the neighboring communities.



## How can TB be controlled at the workplace?

There are several interventions that can be instituted at the workplace for TB control. For TB, it is important to emphasize on simple and economical administrative measures. The

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following measures should be practiced:

- Carry out a risk assessment among the staff to determine vulnerability to infection and institute measures to reduce the vulnerability
- Identify and refer infected persons for prompt diagnosis and treatment. Allow them time off until they are no longer infective
- Triage - this involves identifying the most risky places conducive for spread of TB at the workplace such as the production areas that have many people in enclosed areas. Institute measures in these places first
- Helping TB patients to complete their treatment by instituting DOTS where possible or allowing them time to access DOTS elsewhere
- Educate people on cough hygiene and safe practices to prevent infection
- Provide onsite TB screening periodically with more frequent testing for those in high risk situations or reasonable accommodation for PLHIV if necessary



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- Safe collection of sputum samples if there is a health facility at the workplace
  - Proper aeration of offices and workrooms
  - Training of administrators and health workers on TB control
  - Personal respirators for those with drug resistant strains
  - Surface cleaning, keeping hygienic clean work surfaces and good hand washing practices with soap and water

While instituting these measures ensure the following:

- Target first MDR-TB situation
- Be context sensitive and institute acceptable measures to avoid stigmatizing and discriminating people
- Emphasis be on developing a safe work environment
- Programmes should be consistently and rigorously monitored using national and international standards as the benchmark.



## How can we ensure success of HIV and TB integrated programmes?

### 1. Testing all TB patients for HIV

HIV testing should be offered to every TB patient and if possible at every TB service delivery point using the diagnostic testing and counseling approach (DTC). TB patients should also be included in post-test support mechanisms such as psychosocial support clubs, group therapies and so on. At the organization level employees should be encouraged to take both HIV and TB tests.

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## 2. Screening all HIV patients for TB

Since the incidence of TB disease is particularly high amongst PLHIV as compared to HIV negative persons, they should be screened regularly for TB. These may include screening patients for chronic cough, night sweats, weight loss, and previous history of contact with a person on treatment for TB. Early diagnosis and treatment reduces the burden of TB disease.

## 3. Providing ARVs early to patients with TB

ARVs have been shown to dramatically reduce the incidence of TB amongst PLHIV with current evidence showing that ARVs reduce the incidence of TB disease by up to 80-90%. Hence every eligible PLHIV should access ARVs before their CD4 count falls far below 350.

## 4. Provision of Isoniazid Preventive Therapy(IPT) for PLHIV at high risk of TB

IPTs increase the likelihood that a PLHIV will remain free of TB disease. Further evidence shows that if ARVs are offered together with IPT, there is greater protective benefit. This

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means that the two interventions can be combined to further reduce the risk of TB disease amongst PLHIV in settings with high prevalence of both diseases e.g. in the workplace. The WHO recommends provision of IPT for 6 months to PLHIV at high risk of TB.

## **What are the benefits of integrating HIV & AIDS and TB Programs**

1. Healthy employees means productive employees.
2. Integrated programs have greater benefits and are cost effective.
3. Reduced health care costs due to prevention and early intervention programmes.
4. Reduced risk and vulnerability through behavior change taught through a comprehensive integrated program.
5. Good image of the company to potential applicants, stakeholders, partners and the public.

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6. Integrated programs have been shown to increase job morale and inspire loyalty from employees. Ultimately, this reduces the cost of recruiting, hiring and training new employees.
  7. Integrated programs have the capacity for increased impact on PLHIV, their families, communities and organizations.

### **What are the barriers to HIV-TB integration?**

1. Lack of commitment by management  
When the management does not understand the business case of addressing HIV and TB, they tend to view workplace programmes as a cost rather than as an investment. Lack of understanding of the direct and indirect impact of HIV and TB on the human and financial resources leads to reluctance on the part of management to support workplace programming.
2. Programme culture/ philosophy  
TB programmes are usually characterized by simple

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strong public health focus and deliver medical solutions for a disease that is treatable. This is in contrast to the HIV and AIDS programmes that have had a stronger focus on human rights, confidentiality and involvement of infected and affected people. HIV is preventable but not curable. Programmes have tended to promote primarily behavioural rather than medical interventions.

### 3. Programme focus

Both programmes have in the past been reluctant to broaden their focus. TB programmes have focused on implementing the DOTS strategy while the HIV and AIDS programmes on prevention and control. This is slowly changing with the understanding of the relationship into a more integrated approach.

### 4. Lack and inequitable distribution of resources

Resources are a major barrier to collaborative working. There has been a lack of resources for TB to meet the growing demands of HIV related sicknesses. There has also been inequitable distribution of funds between TB and HIV programmes that are overseen by two different national bodies with different goals.

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## 5. Lack of awareness of the link between TB and HIV

The interrelationship between HIV and TB is not common knowledge that is well understood by the public. These are seen as two independent health issues with their own unique challenges.

## 6. Stigma

Dual stigma of HIV and TB might act as a barrier to TB patients seeking investigation and treatment. With awareness being created on the interrelationship, this knowledge has led to greater stigma and discrimination. With the stigma attached to HIV, this is now extended even to those with TB with the assumption that they must also be HIV infected. This greatly affects health seeking behaviour.

An integrated HIV, AIDS and TB approach maximizes utilization of resources available to address the conditions.





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