# WHO MONOGRAPH ON INTEGRATED MONITORING OF TUBERCULOSIS AND HUMAN IMMUNODEFICIENCY VIRUS

## A case study from Malawi

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## Abbreviations

| | |
|---|---|
| AIDS | acquired immunodeficiency syndrome |
| ART | antiretroviral therapy |
| CPT | co-trimoxazole preventive therapy |
| EPTB | extrapulmonary tuberculosis |
| FDC | fixed-dose combination (of medicines) |
| HIV | human immunodeficiency virus |
| IPT | isoniazid preventive therapy |
| PTB | pulmonary tuberculosis |
| TB | tuberculosis |
| WHO | World Health Organization |

# Foreword

The dual epidemic of tuberculosis and human immunodeficiency virus (TB/HIV) is a major global public health challenge. WHO estimates that of the 1.4 million people living with HIV who are developing TB annually, up to 0.5 million will die of TB. Effective therapeutic interventions to reduce morbidity and mortality are available for both diseases and to achieve universal access for those in need. These interventions have to be delivered and managed in primary health-care settings using a public health approach. In addition, programmes need to prevent and treat comorbidity from TB/HIV. Ensuring the implementation of good-quality services requires effective and simple monitoring and evaluation systems for programmatic management. Examples from the field that describe in detail how such systems can work are essential.

This monograph is a case study of how integrated monitoring of treatment for HIV/TB works in Malawi. It describes in detail the delivery of HIV treatment to a large number of people in one of the most resource challenged health systems in the world. The provision of antiretroviral therapy (ART) in Malawi has been impressive. By the end of 2008, the national HIV control programme had kept 147 479 people alive and on ART, in both the public and private sectors, representing around 75% of those who had been registered cumulatively since the start of the programme in 2003. Malawi also has a good national TB control programme, with 26 000 TB patients registered annually and a treatment success rate exceeding 75%. Both programmes have well-functioning monitoring and evaluation systems with the ability to produce national data on case-finding and treatment outcomes for TB, HIV and HIV-related TB.

The ART registers and other monitoring tools first developed in Malawi served as a prototype for the development of the WHO-recommended IMAI-HIV/AIDS monitoring and evaluation system. As part of the rapid expansion, Malawi also pioneered the public health approach to ART in the private sector and produced cutting edge TB/HIV operational research, published in peer reviewed literature, based on the national monitoring systems. Perhaps most importantly, Malawi has, and continues to demonstrate, technically sound treatment interventions for HIV/AIDS and TB. When accompanied by attention to field implementation, this can leverage limited resources to achieve remarkable results.

We commend this case study to all stakeholders in HIV and TB, be they programme managers or staff, bilateral or multilateral partners, nongovernmental organizations or civil society, or simply anyone looking to support the development of a robust country monitoring system focused on programme delivery. Indeed, for anyone wishing to know more about the practical experience of integrated TB and HIV monitoring, this monograph is essential reading!

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# Executive Summary

This monograph from Malawi provides a case study on monitoring and evaluation for TB/HIV activities. It is hoped that the lessons learnt will enable others to improve data gathering and reporting in the future.

In Malawi, a country with 13.5 million people, each year 85,000 citizens become infected with and 60,000 die of HIV. Around 48,000 people have TB, and of these 68% are related to HIV. By 2004 ART was delivered to 3000 people from 9 facilities in the public sector – the system at that time was disorganised, with different regimens being used and no data on how many patients were enrolled to treatment or on treatment outcomes. The subsequent scale-up of ART in Malawi replaced this individual medicalised model of treatment, with an approach to ART delivery that is based on the TB-DOTS management system: the system that has successfully delivered anti tuberculosis therapy to people in some of the poorest countries of the world. Standard systems of case-finding, treatment initiation, registers, recording and reporting cases, and treatment outcomes were put in place. By the end of 2007 rapid scale up of this system has placed around 150,000 people on ART in 118 public and 45 private sector sites. Quarterly monitoring reports based on a cohort approach indicate that 70 % of clients were alive and on treatment at the end of 2007. This monograph describes how the ART and the tuberculosis monitored outcome data. This register provides a snapshot at any point in time of current patient status. Identity cards and stamps in health passports, patient held health information documents, are also provided. Patient monitoring is conducted monthly or less often if the patient remains healthy. Patient outcomes on the patient master-cards are up dated every three months to the registers, and these are then used for quarterly cohort analyses. Cohort analyses are carried out on those enrolled during the most recent quarter and those ever enrolled from the beginning of ART scale up. Treatment outcomes are also determined at 12, 24 and 36 months after start of ART. All staff in accredited ART sites have received a formal training on the national guidelines, and refresher trainings are carried out at regular intervals. Quarterly supervision is carried out using standard operating procedures, and checklists ensure consistency between registers and master-cards, and accuracy of cohort analyses. Good performers are rewarded with quarterly certificates of excellence. These tools and cohort analyses also provide routine data on HIV related TB. Tuberculosis data are marked on the ART master-card, and are then transferred onto the ART register. TB registers are consulted during supervisory visits, and quarterly and cumulative cohort analyses provide the proportion of those on ART who started this due to TB, as well as the proportion of all TB patients who started