

**Getting Started:
WFP Food Assistance
in the Context of Tuberculosis Care
and Treatment**



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**World Food
Programme**

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Acronyms

AIDS	Acquired Immune Deficiency Syndrome
BCG	Bacille de Calmette and Guerin
CDC	US Centers for Disease Control and Prevention
CIDA	Canadian International Development Agency
CSB	corn-soya blend
DOTS	Directly Observed Treatment Short course
DOTS Strategy	WHO recommended strategy to control TB now included as the core component of the Stop TB strategy
GFATM	The Global Fund to fight HIV/AIDS, Tuberculosis and Malaria
IEC	Information, Education and Communication
HIV	Human Immunodeficiency Virus
JICA	Japan International Cooperation Agency
KNCV	KNCV TuberculoseFonds (Dutch organization supporting TB programmes)
MDGs	Millennium Development Goals
MDR-TB	Multidrug-resistant tuberculosis: a form of tuberculosis that is resistant to two or more of the primary drugs used for treatment. Resistance to one or several forms of treatment occurs when the bacteria develops the ability to withstand antibiotic attack and relays that ability to newly produced bacteria.
MOH	Ministry of Health
MOHSW	Ministry of Health and Social Welfare
NGO	Non-governmental organization
NTP	National Tuberculosis Programme
NTCP	National Tuberculosis Control Programme
PLHIV	People living with HIV
RDA	Recommended daily allowance
TB	Tuberculosis
UN	United Nations
UNAIDS	Joint United Nations Programme on HIV/AIDS
USAID	United States Agency for International Development
VCT	Voluntary Counselling and Testing (for HIV)
WFP	World Food Programme
WHO	World Health Organization
XDR TB	Extensively Drug Resistant TB which is virtually untreatable

Key definitions¹

Incidence rate: the number of new cases arising in a given time period, usually a year

Prevalence rate: the number of new and existing cases within a population over a given time period, usually a year

Sputum smear: sputum smeared on a microscopic slide for examination

Sputum smear-positive: tubercle bacilli seen in sputum smear

Sputum smear-negative: no tubercle bacilli seen after thorough examination of sufficient number of sputum smears (usually three)

Bacteriologically confirmed tuberculosis: tubercle bacilli found either in sputum smears or by culture

Case of tuberculosis: tuberculosis confirmed bacteriologically or diagnosed based on clinical criteria

CATEGORY OF PATIENT FOR REGISTRATION ON DIAGNOSIS

New: patient who has never had treatment for TB or who has taken anti-tuberculosis drugs for less than one month

Relapse: smear- or culture-positive patient previously treated and declared cured or treatment completed

Failure: sputum smear-positive after five months or more of treatment (or after two months or more of treatment if initially sputum smear-negative)

Return after default: return to treatment, after interruption of two months or more

DEFINITIONS OF TREATMENT OUTCOMES FOR SMEAR-POSITIVE PULMONARY TUBERCULOSIS PATIENTS

Cured: a patient who is sputum smear-negative in the last month of treatment and on at least one previous occasion

Treatment completed: a patient who completed treatment but does not meet the criteria for cure or failure

Successfully treated: patients who were cured and those that completed treatment

Treatment failure: a patient who is sputum smear-positive at five months or later during the course of treatment

Died: a patient who dies for any reason during the course of treatment

Defaulter: a patient whose treatment was interrupted for two consecutive months or more

INDICATORS TO ASSESS TREATMENT OUTCOMES

Cure rate: the number of new smear-positive pulmonary TB cases registered in a specific period that were cured / total number of smear-positive pulmonary cases, registered in the same period

Treatment success rate: the number of new smear-positive pulmonary TB cases registered in a specific period cured plus the number of completed treatment total number of smear-positive pulmonary cases

Case detection rate (country): the ratio of annual number of notified smear-positive cases to the number of new smear-positive cases estimated for that year

¹ Toman's Tuberculosis: Case detection, Treatment and Monitoring, Questions and Answers, Second Edition, WHO, 2004



Getting Started: WFP Food Assistance in the Context of Tuberculosis Care and Treatment

Introduction

A century ago, tuberculosis (TB) was the world's leading cause of death by infectious disease because of an absence of treatment. Today, it is still one of the world's leading infectious causes of death among young people and adults even though it is preventable and curable. Due to its close link to HIV and AIDS, the situation in regions with high-HIV prevalence is worsening. Many partners have come together to fight TB² with the implementation and expansion of the DOTS strategy³, constituting a significant step forward.

In order to further improve performance, many TB control programmes have now adopted the Stop TB strategy⁴. The most frequently used incentive/enabler⁵ to support this strategy is food assistance, and WFP is the main food provider.

The purpose of this document is to offer guidance and suggestions to country offices already involved in food assistance related to TB programmes and to help those that are not yet supporting TB programmes to decide whether to initiate this type of support. It also offers responses to central questions concerning TB as well as technical guidance on key issues, such as eligibility for food, geographical targets, optimal rations, various types of food baskets used, and amount and duration of food assistance. Throughout the document are examples of TB-related programmes being implemented in different countries that illustrate WFP's experience in providing food assistance to these programmes. The document also intends to promote the linkage between WFP activities related to TB and those related to HIV and AIDS.

The document has been developed through a three-stage process: a literature review, an analysis of responses to a questionnaire sent to country offices with a TB programme, and field visits to Burkina Faso, Lesotho and Sudan.

2 Throughout the document the abbreviation 'TB' will be used for active TB

3 See page 7

4 See box 4, page 8

5 See box 3, page 8

Section 1: Background

What is tuberculosis?

Tuberculosis is an infectious disease which can be fatal if not treated. Although TB is primarily a disease of the respiratory system, affecting the lungs (pulmonary TB) and being transmitted by coughing and sneezing, it can also affect other parts of the body, such as the pleura⁶, lymph nodes, abdomen, genito urinary tract, skin, meninges⁷, bones and joints (extra pulmonary TB).

Mycobacterium tuberculosis is the main etiologic agent of tuberculosis in humans. Less frequently, TB can be caused by *Mycobacterium bovis* or *Mycobacterium africanum*, the latter being found mainly in patients with TB living in Africa.

TB is one of the most important public health concerns faced by the world today. After years of decline, the number of TB patients has been on the rise since the 1990s, and today the total number of TB cases is higher than at any other point in history, claiming nearly two million lives per year. One-third of the world's population is infected with latent TB (i.e. harboring the bacterium but without symptoms) and approximately nine million people develop active TB (i.e. the bacteria spread in the body) every year. Moreover, TB is closely linked to HIV infection and AIDS, and each disease accelerates the progress of the other.

Box 1: Facts and Figures (data 2005)⁸

- **2 billion people**, equal to one-third of the world's total population, are infected with TB bacilli, the microbes that cause TB
- In 2005, there were an estimated **8.8 million** new TB cases
- A total of **1.6 million** people died of TB
- **195 000** TB cases were associated to HIV infection
- **97 percent** of TB cases **were not** associated with HIV

Poverty, malnutrition, inadequate living conditions (overcrowding and poor sanitation) and lack of basic health services are conditions that contribute to the spread of TB and increase the probability of becoming infected and developing an active form of the disease. Early detection and treatment are crucial to breaking TB's chain of transmission.

Clearly, TB is a global problem that requires an effective response. The United Nations has made TB control one of its targets in the Millennium Development Goals (MDGs).

6 Membranes (2) that line the thorax and envelop the lungs

7 Membranes (3) that line the skull and vertebral canal and enclose the brain and the spinal cord

8 WHO Report 2007 Global Tuberculosis Control, Surveillance, Planning, Financing

Box 2: Millennium Development Goal 6

Combat HIV/AIDS, Malaria and Other Diseases

- Halt and begin to reverse the spread of HIV/AIDS
- Halt and begin to reverse the incidence of malaria and other major diseases

How is TB treated?

The World Health Organisation (WHO) has been recommending the implementation of the 'Directly Observed Treatment Short course' (DOTS) strategy for the diagnosis and treatment of TB for the past decade.

The DOTS strategy⁹ combines five elements:

- Political commitment with increased and sustained financing
- Case detection through quality assured bacteriology
- Standardized treatment, with supervision and patient support
- An effective drug supply and management system
- Monitoring and evaluation system, and impact measurement

DOTS is a proven effective strategy for TB control: after detection of patients through quality assured bacteriology tests, health workers or community trained volunteers ensure that patients take the anti-TB drugs throughout the whole treatment period. One of the core principles of the DOTS strategy is that TB medication is constantly available and free of charge in order to reduce the financial barrier faced by patients during the lengthy therapy.

Treatment regimens aim to cure patients, minimize relapse, prevent the emergence and spread of drug resistant organisms and protect the community from transmission of the infection. The WHO recommends a drug-regimen that lasts six months and requires supervision throughout the treatment period. Alternatively, there is an eight-month treatment available, which requires supervision only during the initial phase.

Both regimens are composed of two phases: an initial intensive phase, which results in a smear conversion (sputum smear-positive becoming smear-negative) in 80-90 percent of patients after two or three months of treatment; and a continuation phase, which lasts from four to six months depending on the regime used. Both regimens have an 85-95 percent success rate. TB treatments are usually well tolerated. However, adverse effects can include skin rash, gastro-intestinal reactions like nausea, vomiting and abdominal pain, peripheral neuropathy (damage to nerves of the peripheral nervous system, i.e. not located in the brain or the spinal cord) and hepatitis.

⁹ www.who.int/tb/dots/whatisdots/en/

How is TB controlled?

The priority for successful TB control is the identification and cure of sputum smear-positive pulmonary TB cases. Studies have shown that a decline in TB incidence can be achieved by detecting at least 70 percent of existing smear-positive cases and curing 85 percent of them. However, the possibility of reaching this level will be minimal without an effective organizational framework.

At the same time, TB control is a multi-faceted problem that requires more than just medical treatment. It requires a comprehensive health response: education, early detection, testing and social support to patients, etc. Such a comprehensive response is usually the responsibility of governments. There is little hope of controlling TB by relying only on biomedical tools. In fact, the most common cause of treatment failure and acquired drug resistance is poor adherence to the lengthy treatment. Increasing access to health services, as well as social support and cooperation, are crucial determinants for the compliance of TB patients. In this regard, 'incentives/enablers' for patients and health care staff can be vital to achieve the compliance needed for successful therapy.

Box 3: Incentives and Enablers

There is no clear distinction between the two terms. In fact, many enablers can also function as incentives and vice versa.

Incentives and enablers are small 'rewards' given to anyone involved in the treatment process in order to improve the outcome. They are given to patients at different points in the treatment, with the intention of encouraging them to attend health care services and follow the treatment. They are also given to health staff to improve their commitment to health care programmes and to motivate them to provide quality services. Incentives/enablers can take the form of food, beverages, goods, services or money, the latter being a contribution to transport costs (see Cambodia case study) or as subsidies for food and/or rent during the time patients are unable to work due to the illness.

To dramatically reduce the global burden of TB by 2015 in line with the MDG and the Stop TB Partnership¹⁰ targets, WHO launched the Stop TB strategy in 2006, emphasizing the role that communities may play in increasing case detection and supporting TB care.

Box 4: Components of the Stop TB Strategy (2006)

- Pursue high-quality DOTS expansion and enhancement
- Address TB/HIV MDR-TB and other challenges
- Contribute to health system strengthening
- Engage all care providers
- Empower people with TB, and communities
- Enable and promote research

¹⁰ The Stop TB Partnership was established in 2000 to realize the goal of eliminating TB as a public health problem. It comprises a network of international organizations, countries, donors from the public and private sectors, governmental and non-governmental organizations and individuals that have expressed an interest in working together to achieve this goal. WHO is the core of this network and hosts the Secretariat.

Box 5: WHO and Stop TB Partnership Targets

- **By 2005:** detect 70 percent of new infectious TB cases and cure 85 percent of those detected;
- **By 2015:** reduce by 50 percent the global burden of TB disease (deaths and prevalence) and start reversing incidence trends;
- **By 2050:** reduce the global incidence of TB disease to less than 1 per million people.

The data and estimates in the 2007 WHO Global Tuberculosis Control Report (providing the 2005 data) suggest that the world narrowly failed to meet the targets for case detection (70 percent) and treatment success (85 percent). Both targets were reached in the Western Pacific Region, and the South-East Asia Region achieved more than 85 percent treatment success. All other WHO regions missed both targets. The European Region performed worst on both indicators.

Case detection exceeded 50 percent, and treatment success exceeded 70 percent, in 85 countries. Of these countries, 26 have met both targets. This success represents a major landmark in TB control history and proves that TB control is effective, even in countries with limited resources. However, nearly two million active TB cases that occur each year are being missed.

What is the relationship between TB and HIV infection?

TB and HIV infection are closely connected: each disease accelerates the progress of the other. By weakening the immune system, HIV increases the risk of acquiring a new TB infection or of progressing from latent infection to active TB. It also increases the chance of a relapse of the disease in previously cured patients. HIV also alters the clinical course of TB by increasing the number of smear-negative and extra-pulmonary TB cases. Consequently, TB infections are harder to detect and cure, thus making targets of TB control more difficult to reach. HIV drives TB incidence and mortality in high-HIV prevalence areas.

Conversely, TB accelerates the progression of HIV infection to AIDS in patients. TB is the most common opportunistic infection and one of the biggest killers of people living with HIV (PLHIV). At least one-third of the 39.5 million people estimated to be living with HIV around the world is likely to be infected with the TB bacteria and at greatly increased risk of developing TB disease. Up to 80 percent of TB patients are co-infected with HIV in sub-Saharan Africa. Improved collaboration between TB and HIV programmes will lead to more effective control of TB among PLHIV and can ensure that HIV-positive TB patients get the HIV treatment and care they need.

“The TB and HIV communities can do much more together to address these leading causes of illness and death than they can apart. Much greater collaboration is essential if we are going to reach our common goals of achieving universal access to TB and HIV prevention, diagnostic and treatment,” said Dr Alasdair Reid, HIV/TB Adviser, UNAIDS (March 2007).

Where HIV is fuelling the TB epidemic, as in sub-Saharan Africa, it is imperative to recognize the association between poverty, TB and HIV and address the co-infection.

How can TB and HIV infection be controlled jointly?

There is a growing need to involve communities in TB and HIV infection control. The treatment of both infections requires a long-term commitment from health care providers and volunteers, both of whom must be particularly sensitive to the inherent stigmas of the diseases. Involvement at the community level increases TB and HIV case detection rates, facilitates detection at an earlier stage and contributes to better compliance in affected patients. In addition, community outreach costs are reduced whenever the two diseases are addressed jointly, and valuable synergies in information, education and communication can be created.

Due to their overlapping epidemiology, strong collaboration between HIV infection and TB control programmes is essential to achieve comprehensive and effective care and prevention and subsequently significant improvements in public health. The most effective intervention against TB beyond case detection and treatment is to prevent new HIV infections in people already infected with *Mycobacterium tuberculosis*, reducing the likelihood that latent TB will progress to active TB. Furthermore, efficient coordination of TB and HIV and AIDS services could increase access to voluntary HIV counselling and testing and help identify TB patients who are also HIV-positive. In some countries it might be easier to launch a TB programme, and thus the TB programme can serve as an entry point to start an HIV infection and AIDS programme.

Despite the need for coordination and combination of HIV infection and TB prevention and treatment, the strong stigma associated with each disease must not be underestimated. Co-infection translates into double discrimination.

What is the social and economic burden of TB?

The relationship between TB and poverty is complex and the social and economic impact of TB on society is immense¹¹.

In sub-Saharan Africa and South-East Asia 75 percent of people with active TB belong to the economically productive age group (14-54 years). Globally, 95 percent of TB cases and 99 percent of TB deaths occur in developing countries, where the epidemic has been exacerbated by socio-economic decline of the poorest population. TB impoverishes those who suffer from it: if not provided for free, direct costs of diagnosis and treatment are significant for poor families. Increased incidence of drug resistance to *Mycobacterium tuberculosis* strains requires the use of second line anti-tuberculosis drugs, which are more expensive and less effective than first line medication.

But the real economic burden that people have to face is represented by indirect costs such as the loss of employment or productivity due to illness, travel costs incurred by people visiting health facilities and other treatment-related costs. Moreover, the strong stigma associated with TB and HIV co-infection often has negative social consequences, which keeps people away from care and treatment opportunities.

Whereas the male-to-female ratio of TB cases reported to public health authorities worldwide is approximately 2:1, the TB case-fatality rate seems to be higher among women. The reason for this

11 www.who.int/tb/publications/tb_2005_352_tb_poverty.pdf

disparity is unclear. Nevertheless, TB kills more young women than all causes of maternal mortality combined (Toman, 2004). The disease has a profound social, economic and physical impact on women particularly in the developing world. They are especially affected by stigma and discrimination, often leading to abandonment by their families and/or their children dropping out of school. Women also have poorer access to TB care because they have less decision-making power.

What is the relationship between TB and malnutrition?¹²

It has long been recognized that TB is linked to poverty and malnutrition: malnutrition weakens the immune system and predisposes people to develop TB as much as any other infectious disease. Conversely, active TB leads to malnutrition. TB patients frequently suffer from a loss of weight and appetite and consequently present a low body mass index and skin fold thickness. Moreover, it leads to a decrease in the concentration of micronutrients (vitamin A, B, E, zinc, iron), which, in turn, affects the immune system. Combined with medical treatment, adequate nutrition plays an important role in the fight against TB, as it does against any other infectious disease, by restoring and protecting the integrity of the immune system.

Many patients affected by TB were already facing household food insecurity before getting sick. The food security situation often deteriorates due to the illness. For these patients, food is a beneficial component of TB care to enable them to stay on treatment and get back on their feet.

The impact of nutrition on the course of active TB has not yet been fully identified, and even though it is evident that healthy nutrition is vital for all individuals regardless of their TB or HIV status, further research on the role of nutrition and micronutrient supplementation in TB care is needed.

Why is it important for WFP to be involved in TB programmes?

WFP uses food aid to meet emergency needs and support economic and social development. WFP's food assistance can take many forms, but they all aim to improve the nutrition, quality of life and self-reliance of poor people and communities, thus contributing to countries' efforts to achieve the MDGs. WFP's food assistance to TB programmes contributes to its mission by enabling patients to undergo treatment for a disease that has affected their nutritional status and self-reliance, and by helping them to improve their nutritional status, which has been compromised by TB. The effectiveness of food aid as an incentive for the TB programmes has been recognized.¹³

12 The relationship between malnutrition and tuberculosis: evidence from studies in humans and experimental animals, Cegielski J.P., McMurray D.N. *The International Journal of Tuberculosis and Lung Disease*, Volume 8, Number 3, March 2004, pp. 286-298(13)

13 Stop TB Partnership, MSH/RPM and the World Bank. *Building an evidence base on the role of incentives and enablers in improving TB control programmes? Summary of findings to date*, October 2003

Box 6: WFP in Lesotho (as of 2005)

WFP food assistance for TB programmes in a country with a low TB treatment success rate (45 percent) and the third highest HIV prevalence rate in the world

WFP has been working in partnership with the Ministry of Health and Social Welfare in Lesotho to support TB patients since 2003.

The DOTS strategy was adopted in 1991 and TB diagnosis and treatment are provided free of charge at all government health facilities (100 percent DOTS coverage). In 2002 the case detection rate for new smear-positive TB cases was 66 percent, with treatment success in only 45 percent of them (according to the latest data available on the WHO TB epidemiological profile).

Most of the TB patients are in the economically active age group (15-54 year olds), and among the people registered in TB programmes men outnumber women by almost two to one. The major factor fuelling the TB epidemic is HIV. At the end of 2005, HIV prevalence was estimated to be 23.2 percent, the third highest in the world. In fact, surveys conducted among TB patients showed an increase in HIV prevalence from 39 percent in 1995 to 76 percent in 2005.

Eligibility criteria for receiving food are: i) food insecurity; ii) positive test for TB through sputum test or chest X-ray; and iii) enrolment in DOTS TB treatment programme. Only out-patients receive WFP food. On a monthly basis, WFP and its partners distribute food to 171 out of 181 health care centres throughout the country.

A family ration consists of 400 g maize meal, 60 g pulses and 20 g oil per person per day for six months. In addition, an individual ration of 200 g of CSB per day is provided only to the patient. The quantity of the family ration is not automatically based on the assumption of a five-member household. Rather, a verification process serves to estimate the real size of the family. A total of 2,529 patients a month benefit directly from WFP's food assistance, while there are 18,953 indirect beneficiaries.

Patients claim that CSB helps them gain weight quickly. Health workers affirm that food assistance has increased adherence to the treatment. However, they find it hard to give away the food, while they, working on a voluntary basis, do not receive any incentives. Furthermore, some problems related to timely coordination have been reported. In health centres where the day of medicine distribution falls before the food distribution day, the patient may delay coming to the health care facility to support only one trip a month. However, the biggest challenge remains the integration of TB and HIV programmes, which is on the agenda of both the Stop TB Partnership and UNAIDS.

In this context, WFP has been providing food assistance in a number of countries to explore what role it might play in mitigating the impact of TB by improving patients' adherence to treatment and helping them to meet their nutritional needs. In its efforts, collaboration and partnerships are essential to combine WFP's competencies on food and logistics with the expertise on TB prevention and care from other organizations.

In 2003, WFP became co-sponsor of UNAIDS, responsible for dietary/nutrition support in HIV treatment, care and support interventions¹⁴. Over the past several years, there has been an expansion

14 UNAIDS Technical Support Division of Labour, Summary and Rationale, 2005

of DOTS as the number of people affected by TB and/or HIV has increased. This has given WFP the opportunity to specifically reach HIV infected TB patients when supporting TB programmes and to advocate for proposing voluntary counselling and testing (VCT) to TB patients.

What are the objectives of WFP's food assistance in TB care and treatment programmes?

WFP's food assistance to TB care and treatment programmes within the Stop TB strategy has three objectives:

- Help patients in food insecure households meet their nutritional needs during the treatment period, thus enabling the body to fight the infection and return to a healthy state;
- Enhance adherence of patients and providers to the programmes, and subsequently improve the cure rate of TB patients;
- Encourage attendance at health care centres as part of their survival strategy, therefore contributing to an increase in newly detected cases and successfully completed treatments.

In the long term, WFP hopes to support governments in reaching the MDG 6 through their National Tuberculosis Control Programmes (NTCPs). Keeping TB patients in the 'health loop' for the duration of their treatment also allows health workers to advocate for HIV testing.

Box 7: Nutrition, Food Aid and TB: How WFP Country Offices see it

- In **Cambodia**, patients and providers use food assistance as a nutritional supplement and as an incentive to increase patients' attendance at TB centres. Food is provided to patients while they are in the hospital during the intensive phase of treatment (first two months). Food assistance enables out-patients to complete the continuation phase by motivating them to go to the health care facility where their treatment is provided together with food.
- In **Chechnya**, WFP's food assistance diversifies regular food rations provided by the government to TB patients in the hospitals, helping TB patients to meet their nutritional needs and improving their nutritional status. WFP and partners are also providing food assistance to TB out-patients, enabling them to stay on treatment, increasing their attendance at health care centres and supporting their families during the vulnerable time when an income-earner is unable to work.
- In **Malawi**, providers agree on the pivotal role of nutrition in curing TB. However, statistical evidence demonstrating that nutrition interventions decrease mortality is still missing.

Who are WFP's partners in TB control?

Since TB control programmes fall under governmental responsibility, WFP only becomes active with full approval from national governments.

Partners can be divided into institutional partners (e.g. Ministry of Health), technical partners (e.g. WHO, CDC) and operational partners (NGOs and other community-based organizations). The coordination among WFP and its partners creates synergies and facilitates the identification of food-insecure patients and households and allows for the implementation of food assistance programmes.

Box 8: Successful Partnership in Cambodia¹⁵

Cambodia launched the National Tuberculosis Programme (NTP) in 1994. Cambodia's NTP operates under the responsibility of the National Center for Tuberculosis and Leprosy Control (CENAT) and within the overall national health system. Cambodia has a diverse group of technical partners including the US Centers for Disease Control and Prevention (CDC) (TB/HIV pilot programme activities), Japan International Cooperation Agency (JICA) (training and supervision, laboratory technical support, IEC, procurement, operational research, TB/HIV), KNCV TuberculoseFonds (training and workshops, community DOTS) and the WHO (training and supervision, laboratory technical support, IEC, procurement, TB/HIV). The main financial partners are the Canadian International Development Agency (CIDA), the Global Fund to fight AIDS, TB and Malaria (GFATM), JICA, the United States Agency for International Development (USAID), WHO and the World Bank. Operational partners include WFP, local NGOs and community-based organizations. This successful partnership has resulted in a dramatic increase of case detection rate and cure rate.



15 Strauss A., Ahmed M., Tan Eang M.: Food aid and TB control in Cambodia: 10 year review (1994-2004) and future challenges; abstract PC-1491-20, 36th World Conference on Lung Health of the International Union Against Tuberculosis and Lung Disease.

Box 9: WFP in Sudan

WFP food aid and TB programmes in a conflict setting, with food aid based on a vulnerability and conflict assessment

WFP has been providing food to TB patients in Sudan since 1996.

More than two decades of war have left the country in a complex emergency situation. Displacement of people, overcrowded refugee camps, poor hygiene and malnutrition, as well as paralyzed health care services with shortages in medical staff and TB drugs, have contributed to creating conditions for the spread of TB.

The implementation of DOTS started in 1993 and full coverage was reached in 2002. In 22 of Sudan's 26 states the DOTS activities are organized by the NTP, while in the remaining four they are organized by the WHO's TB Control 'Horn of Africa' Initiative. In all TB centres, diagnosis and treatment are free of charge.

In 2002 case detection rate of the smear-positive cases and treatment success rate were 33 percent and 78 percent, respectively. The prevalence of HIV among TB patients is 13 percent. Most patients with TB are also affected by food insecurity and poor nutritional status. Only out-patients receive WFP food.

WFP's food assistance for TB patients covers five states, with a long-standing involvement in some areas (Juba and Port Sudan, since 1996) and more recent support in others (Kassala, since June 2005). Eligibility criteria are based on a vulnerability and conflict area assessment.

Rations consist of 50 g CSB, 450 g cereals, 50 g pulses, 30 g vegetable oil, 10 g salt and 25 g sugar per person per day, corresponding to 2225.5 Kcal. WFP's food assistance is based on individual rations, with the exception of Kassala, where family rations (five members including the patient) are provided and five health workers receive food as well. Food assistance is supplied throughout the treatment period of six months. The number of beneficiaries for the period from January to August 2005 was 13,452.

Food transportation and distribution are carried out by WFP, with the exception of the state of Kassala, where volunteers are paid a financial incentive for food distribution.

Quantifying the impact of food assistance is still difficult. Patients reported improvements in well-being and confirmed that food was an incentive to continue treatment. But providers outline the difficulty in targeting beneficiaries, since patients tend to deny their illness and avoid treatment because they fear stigma and isolation.

To obtain sustainable progress in the fight against TB in Sudan, it is crucial to tackle the stigma surrounding TB and HIV along with an integration of TB and HIV and AIDS programmes.

Section 2: Technical Guidance

When reading this section, please keep in mind that WFP does not act alone in deciding to support TB programmes. This support comes as the result of discussions with the national health authorities. Subsequently, the choice of the eligible population is the consequence of national requests and feasibility criteria (in terms of available food resources).

Who should receive food (eligibility criteria for food assistance)?

While stipulating the eligibility criteria for food aid as part of TB programmes, the following key issues should be taken into account:

- The local food security situation
- Objectives of food support
- Characteristics of potential beneficiaries
- Logistics capacity needed for food delivery

An assessment of the food security situation of potential beneficiaries will help determine on what basis food support should be provided (e.g. individual ration versus family ration), what type of criteria might be used to screen beneficiaries and, of course, what the health authorities have requested.

Depending on the country, food aid will be provided in different ways. For example:

- **All TB patients under treatment** are considered eligible for food support (e.g. Burkina Faso, Chechnya)
- **Only in-patients** receive food (e.g. Djibouti and Sierra Leone)
- **Only out-patients** receive food (e.g. Lesotho, Sudan)
- Eligibility criteria are **based on the food security situation of the patients** (e.g. Lesotho, Sudan, and Tajikistan)
- **Individual food rations** are provided (e.g. Burkina Faso, Cambodia, Djibouti, Mali, Sierra Leone, Somalia and Sudan)
- **Family rations** are provided (e.g. Afghanistan, Chechnya, Eritrea, Haiti, Lesotho, Malawi, Sudan Kassala, Tajikistan, Uganda and Zambia)

Box 10: WFP in Burkina Faso

WFP food assistance for all TB patients and volunteers in charge of food distribution in all TB health care centres in this heavily indebted poor country with a very low TB detection rate (17 percent)

WFP started to support TB programmes in Burkina Faso in June 2004.

In 2002 the TB detection rate of new smear-positive cases was 17 percent, thus far away from the 70 percent target pledged by the WHO for 2005. The treatment success in new smear-positive cases was 64 percent in 2002.

The NTP was established in 1995. DOTS coverage reached 100 percent in 2000, with TB control activities being carried out in 80 public health centres countrywide. However, only 27 percent of the population was attending the health centres in 2002. The prevalence of HIV among TB patients is 23 percent.

The Global Fund to Fight HIV and AIDS, Tuberculosis and Malaria (GFATM) granted a request by Burkina Faso for funding in order to support WFP and expand the assistance to all TB centres from 2005 to 2009 (GFATM 4th round). The total cost of the project is about US\$1.95 million for five years, and 936.6 tons of food will be distributed.

The objectives of the food support are to increase attendance at testing and treatment centres and to reduce the defaulter rate. Expected results are an increase in the treatment success rate from 64 percent in 2005 to 85 percent in 2009, a decrease of the defaulter rate from 12.6 percent to 10 percent and an increase in the detection of new smear-positive TB cases from 18 percent in 2004 to 70 percent in 2009.

There are no exclusive eligibility criteria and all health centres (78 centres in 2005) have benefited from the food assistance since September 2005. Food is provided to all TB patients together with volunteers in charge of food distribution in the health centres.

A monthly individual ration is provided for the duration of the eight-month treatment and includes 12 kg cereals, 1.8 kg pulses, 0.75 kg oil, 1.5 kg CSB, 0.15 kg salt and 0.6 kg sugar. CSB and salt were introduced to respond to the increased need for micronutrients by TB patients. The estimated number of beneficiaries for 2006 was 5,875.

An assessment of the impact of food aid has not been carried out so far. However, first observations show an increased attendance at health care centres and a decrease in defaulters which can be attributed to improved health services and to food support.

Where should programmes be geographically targeted?

By providing food assistance to TB programmes, WFP aims to reach food-insecure people who are affected by TB. It is important to keep in mind that not all people infected with TB (or HIV) are automatically in need of food assistance. Therefore, precise targeting is crucial, unless other information is provided or an agreement is made with the national authorities (e.g. in Cambodia). It is essential to analyse the vulnerability of potential beneficiaries to food insecurity before initiating assistance. Specific criteria such as TB prevalence, malnutrition rates and food security considerations also need to be taken into consideration when deciding on targeting. Conducting a survey about food and livelihood security before beginning to provide food assistance would also establish a baseline in order to determine to what extent food insecurity is a problem among the urban population (where TB prevalence, poverty and food insecurity are high) and how it changes over time.

In countries where WFP is already supporting HIV and AIDS programmes, country offices may also explore the possibility of encouraging partners to integrate HIV infection and AIDS and TB care and treatment services.

What are the nutritional needs of TB patients when developing a food basket?

It is essential to consider the nutritional requirements and the special dietary needs of TB patients when developing the food basket for TB programmes. Due to the high rate of HIV and TB co-infection in Africa, where 66 percent of WFP interventions take place (2005 data), the nutritional requirements for TB programmes should not differ from those for PLHIV. A technical consultation organized by the WHO in 2005¹⁶ confirmed that PLHIV have greater needs for energy. Specifically, the report outlined an increase of 10 percent in energy requirements among asymptomatic adults, and 20-30 percent greater energy needs during symptomatic HIV. For children with HIV experiencing weight loss, the needs are even greater: an intake of 50-100 percent over normal requirements was recommended. As in a normal diet, proteins should represent 10 to 12 percent of the overall Kcal, and fats should account for at least 17 percent. While insufficient evidence exists to recommend increased protein intake, its absolute quantity may actually increase due to the overall increase in energy levels of the food basket. Although the adequate consumption of micronutrients is important, their intake should be kept at the recommended daily allowance (RDA) level.

The composition of food rations varies from country to country. Typically, the basic ration is comprised of maize, pulses, vegetable oil and corn-soya blend (CSB). In addition, beneficiaries may receive sugar, salt, rice, lentils and fish, depending on the country. Besides nutritional requirements related to the physical condition of the beneficiaries, the ration composition needs to reflect cultural concerns (e.g. consumption habits), which can create situations of trade-off. For example, while rice, the main element of food baskets in Cambodia, might reflect local habits, it is relatively poor in micronutrients, which TB patients urgently need. The composition of the food basket will also depend on availability of food stocks and the stability of the food pipeline.

16 Consultation on Nutrition and HIV/AIDS, Durban, South Africa, 10-13 April 2005.
www.who.int/nutrition/topics/consultation_nutrition_and_hiv_aids/en/index.html

What amount of food should be given?

For proper food basket planning, many considerations have to be kept in mind. As mentioned before, the composition of the final basket will depend on the local context and the objectives of the programmes. The outcome of the assessment of the beneficiary's food security situation, including discussions with households, social workers and community leaders, will strongly influence the amount of food provided (full or complementary ration) as well as the decision to provide an individual or household ration.

Full ration: A ration usually given to in-patients during the initial intensive phase, considering that they have no other access to food. In some countries, a full ration is also given during the consolidation phase.

Complementary ration: A ration provided to TB patients during the consolidation phase and sometimes to caregivers and family members. In some countries, the minimum Kcal per day needed for survival is used as a basic criterion.

Individual ration: In many circumstances a patient who is receiving an individual ration will inevitably share the food within the family. The probability that the remaining food portion will not meet the patient's individual intake need is high. The compliance with medical prescriptions may be altered due to increased side effects of anti-tuberculous drugs taken on an empty stomach.

Family ration: In most countries, calculations of family rations are based on the assumption that the average family has five members including the patient. Family rations may help to maintain the productivity and income-generating capacity of other adults living in the same household and to ensure that the potential nutritional benefit for the patient is not diluted. This does not necessarily mean that every family member must receive a full ration or that family rations have to be provided throughout the entire treatment period. Close post-distribution monitoring can serve to make adjustments in case families are able to meet part of their food needs.

Examples from the field regarding the number of rations provided in a family food basket show considerable differences between countries as well as within the same country (e.g. Zambia). Differences within the same country often have the effect of some TB facilities being more frequented than others.

How long should food aid be provided?

The duration of food assistance for TB patients should be determined through an analysis of the need and objectives of food support. These objectives vary widely by country, and even inside some countries.

In most of the countries where food assistance is provided to TB patients, WFP aims at providing food throughout the duration of the treatment. However, the duration of food support varies significantly: two months (Mali), six months (Burkina Faso, Cambodia, Djibouti, India, Lesotho and Somalia), eight months (Angola, Haiti, and Zambia), nine months (Malawi) and ten months in Chechnya or more in cases where patients with multi-drug resistant TB need longer periods of treatment. In some countries, food assistance is provided only to patients as long as they are in hospital (e.g. up to three months for in-patients in Sierra Leone).

What sort of indicators should be used to monitor and evaluate the impact of WFP's food assistance?

The decision about which monitoring and evaluation indicators to collect in the context of a specific project should be part of a larger process of programme design, which starts with the formulation of context-specific and realistic objectives¹⁷ as well as planned results (outputs and outcomes).

Outputs

Mandatory output indicators are standardized across all WFP activities. For food support to TB programmes, the following output indicators need to be monitored and reported on:

- Number of food beneficiaries through TB activity, by sex and age
- Number of TB patients (or participants), by sex and age
- Metric tons of food distributed through TB activity, by commodity

Output data is collected using WFP's standard tracking system. Data collection modalities should be designed taking into account who delivers the food to health facilities (Ministry of Health, WFP, etc.) and who distributes the food to beneficiaries (health services, social services, NGOs, WFP, etc.).

Outcomes

With regard to outcomes, three objectives of WFP's food assistance in TB programmes are listed on page 13, all leading to improving the health status of food insecure TB-infected people. Outcome-level indicators identified to monitor WFP's performance should be harmonized with the indicators used by the national ministries of health and the WHO for measuring outcomes in TB control programmes¹⁸:

- Cure rate and death rate (indicators of the patients' health status)
- Defaulter rate: this indicator can be used to measure whether the food intervention has succeeded in enhancing adherence to the programme
- Case detection rate: this indicator can be used to measure to what extent food support encourages patients to enrol in the TB programme, only if WFP's intervention is nationwide and large scale

'Cure rate' is generally recommended because it is one of the indicators collected yearly for WHO but the other indicators can also be used for WFP outcome measurement. Other indicators may need to be identified to address a specific context, programme design or objectives.

17 See *M&E Guidelines* available from <http://home.wfp.org/meknowledgebase/index.asp> and *RBM Orientation Guide* <http://docustore.wfp.org/stellent/groups/public/documents/other/wfp022113.pdf>

18 For indications on the indicators below, see *Compendium of Indicators for monitoring and evaluating National Tuberculosis Programs*, Stop TB Partnership, August 2004, available at www.stoptb.org/wg/advocacy_communication/assets/documents/Compendium%20of%20Indicators%20for%20Monitoring%20and%20Evaluating%20NTP.pdf



Since WFP cannot collect outcome data by itself, it has to rely on its partners. The commitment to gather and share these data with WFP should therefore be an explicit part of the agreement between the national authorities, cooperating partners (if any) and WFP, which defines the programme and respective partner tasks.

Interpreting outcome results

One of the main challenges related to the use of outcome indicators in care and treatment programmes is that such indicators reflect many factors that may or may not relate to whether or not a person received food assistance. In most cases, it is difficult or even impossible to specifically 'attribute' changes observed at the outcome level to a specific component of an intervention, such as food supplementation. For this reason, when interpreting results, a number of critical factors need to be taken into consideration, including: testing capacity, availability of drugs, quality of medical staff, and adequate health and nutrition counseling.

Having baseline figures (i.e. data before or at the onset of TB programme support) can help set targets and interpret results. Even if no baseline is available, it is important to compare results over time in order to identify trends, temporary problems, etc.



Section 3: Taking Action

The decision to support TB control programmes will very often be the result of resource availability and ongoing dialogue with the Ministry of Health and partners, not always with WFP at the table. For example, Burkina Faso submitted a TB proposal for the Global Fund and after receiving food resources the Government approached WFP to assist the NTP with distribution.

In general, though, WFP should be considered as a valid and willing partner in fighting the tuberculosis epidemic. Moreover, staff members need to have the following basic information: where and how TB programmes are currently working; who is implementing the programmes; and the potential role of food aid.

Preliminary actions

- Contact the MOH and the WHO to find out if they have an in-country map of current/future TB health care centres and see if these centres are in WFP working areas.
- If the MOH is not functioning (post conflict, etc.), analyse with the WHO and the local health authorities the current TB situation to find out the best strategy to implement the TB control programme.
- Initiate a meeting with the MOH to build consensus and understanding on what needs to be done and how partners can work together to support TB programmes.
- Develop partnerships with NGOs already active in food assistance activities.
- Advocate for the use of TB programmes as an entry point for education, HIV testing and HIV and AIDS care and treatment for TB cases where patients are HIV-positive.



Box 11: WFP in Somalia

WFP food aid for TB programmes in a poor, high-TB-prevalence country which has been without an effective central government for over a decade

WFP has been providing food assistance to patients enrolled in TB treatment programmes, coordinated by WHO, in Somalia since 1995.

Somalia has been without an effective central government since 1991. Due to long civil strife and factional fighting, all public social service infrastructure and essential support facilities have been completely destroyed. In most parts of the country, there is rampant insecurity and access to health facilities is very difficult.

Somalia has a high incidence rate of tuberculosis. WHO estimates that the incidence rate of all TB cases was 411 per 100,000 while the incidence of smear-positive cases was 183 per 100,000 in 2004. About 80 percent of the cases occur in the productive age group.

WHO and WFP, together with local health authorities and several NGOs, have given priority to TB control. The WHO/WFP TB programme started implementing DOTS in 1995. Full DOTS coverage was achieved in 2000, when at least one TB center was made operational in each of 18 regions of Somalia. However, due to the presence of vast regions with a nomadic lifestyle, access to TB treatment remains difficult for many people. Expansion of the TB programme to more than one centre per region is expected to enhance access and thus case detection rate. There are some 46 operational TB centres in Somalia that implement DOTS, and plans are underway to open more.

Currently, in collaboration with WHO and other partners, WFP provides food support to 20 TB centres in 18 regions. Food serves as an incentive to complete the full course of treatment. WFP provides individual food rations to TB patients for six months. The individual food basket consists of cereals, pulses, vegetable oil and CSB. In total, 580 g per person per day (17.4 kg per person per month) are provided. The number of patients supported by WFP has progressively increased. In every treatment cycle (six months), WFP is supporting some 4,000 TB patients.

The DOTS case detection rate was 44 percent in 2004. Treatment success rate was around 90 percent in 2003. In order to accomplish the national target (70 percent case detection rate in 2007), and to maintain the achieved target of the treatment success rate, WHO and WFP are working together with many partners.

The case of Mhumed Y. Ahmet

Mhumed Y. Ahmed is a father of four and comes from a nomadic area about 300 km southwest of Hargeisa. He lost most of his livestock during previous droughts. There are no clinics in the area and thus access to health care services is very difficult.

Mhumed states, "It was last year when I started coughing badly, and I did not know what the problem was. The cough worsened day after day until at last I coughed blood. I became very weak and sick. Everybody in the nomadic neighborhood came to know that I was sick.

One day, a woman visited us and told my wife that she had the same problem until one of her relatives took her to Hargeisa, where she was hospitalized and was provided with free drugs and free meals for six months.”

Mhumed came to Hargeisa, where he tested TB positive. He says: “When I came here, I had no money and I did not know anybody in Hargeisa. Thanks to the hospital I was provided with free meals and free drugs. I would not be able to continue the treatment without the food. It would not be possible at all. I am poor and sick and have nobody else to support me. My home is very far and my wife cannot afford to send anything. TB treatment without food support is not possible.”

Mhumed completed the TB treatment and is now completely cured. He says, “I am grateful. With TB drugs and free meals I am healthy again.”



Key questions to ask potential partners (governments, UN agencies, NGOs, community-based organizations and hospitals)

- What and where are the existing health care facilities in the country that treat TB patients?
Do they follow national programme guidelines? How many people do these programmes serve?
What are the defined goals of these programmes?
- Do the beneficiaries of these programmes need food? Why or why not? Where is food most needed?
For how long? How might food contribute to the overall purpose and goals of the programmes?
- Do these programmes have an interest in exploring the food security situation of their beneficiaries?
- Is there an opportunity to link TB programmes with income-generating activities, school gardening, training or other activities?
- In areas where WFP is already working with partners, could food aid programmes be expanded to include TB patients?
- Has the government built capacity of its staff in TB programmes? If not, are there plans for it?
If it has been done, what was covered? For whom? Was it comprehensive or are there gaps that still need to be filled?
- What sort of advocacy, communication and social mobilization activities have been carried out in the country? What exactly has been done? By whom (MOH, WHO, NGOs)?
- Do partners have the capacity and logistics to handle storage and distribution of food? If not, what support may be needed from WFP in terms of capacity development? Do partners have the capacity to counsel patients on food and nutrition issues? Can linkages be made between health services and community-based organizations?
- Have any partners conducted nutritional surveys or assessments? If yes, where, when and what were the findings? Are there any data on adult nutritional status?
- Is there an opportunity to link TB programmes to HIV and AIDS programmes or other health-related activities?

Box 12: Guiding Principles of 'Taking Action'

- Recognize the valuable role WFP has to play in the fight against TB
- Recognize and support the food and nutrition needs of TB patients
- Use and strengthen existing partnerships in order to support TB programmes
- Identify potential opportunities and entry points with new partners, such as MOH and NGOs, to support TB programmes
- All TB programmes must adopt the Stop TB strategy approved by the government
- Work closely with partners that have expertise in TB such as WHO and the MOH
- Be flexible and consider partners' suggestions in addressing challenges
- Use the experience, expertise and resources of other organizations and partners to further support and contribute to TB programmes

Box 13: WFP in Myanmar

The role of partnership: WFP and Malteser International in the fight against TB

Malteser International has assisted the TB control programme in Northern Rakhine State since 2004 by supporting the government health care system.

Malteser has conducted DOTS provider training to community health workers to raise awareness of TB and to regularly provide treatment to TB patients. Malteser has also established a referral system through the Malteser out-patient department to the Township Hospital, aiming to increase the case detection rate. In addition, Malteser supports suspected TB patients throughout the investigation procedures carried out by the hospital and helps the Township TB campaign in monitoring and follow-up of TB patients.

In collaboration with WFP, Malteser provided nutritional support to individual TB patients (individual rations) since June 2004. As most TB patients are poor and unable to work during the treatment, nutritional support initially only provided to individual patients had some unintended results: the ration was shared with the family, or sold to receive some income for the entire family. As a consequence, nutritional support for all family members of the patient (family ration) was introduced in October 2005.

The case of Kobi Amed (as of April 2006)

Kobi Amed, (below right), is a 43-year-old Muslim with four children. In January 2006, he was referred to the Malteser out-patient department for a check-up for his chronic cough and evening fever. After two weeks of treatment with two different broad-spectrum antibiotics, he still did not show improvement and was therefore referred to the Maungdaw hospital for further care.

At the hospital, after the sputum examination, he was diagnosed to have sputum-positive pulmonary TB. Treatment started in February and lasted for six months.

Shortly after the beginning of the treatment, one of the health educators from Malteser paid a visit to Kobi Amed's house to assess the socioeconomic status of the family. He and his family, six in total, lived in the hut shown in the photo. Mr Kobi was too weak to work at that moment, but he still accepted some jobs from time to time to support the family. The whole family lived on an income of around 5000 Kyats (US\$5) a month, in part contributed by his 15-year-old son who sold snacks at the market.

The family was very upset when the father fell ill. Of course, they needed money to take him to a private clinic and to buy energy-rich food for him. They were in despair as the family income was not large enough to meet these ends. With the help of a Malteser-trained community health worker, he was referred to the Malteser out-patient department and was surprised to discover that both the department and the hospital charged nothing for the treatment. The family was full of joy when the staff from Malteser let them know that the father was entitled to obtain nutritional support for the whole family. In fact, they received nutritional support for the first three months.

Through the family support, the father could rest while being treated. He is getting better, as he takes the treatment regularly. His weight has already increased by 2 kilograms in three months. He hopes that he will soon be able to work and earn for the family again. The course of his treatment is expected to be completed by the middle of August and then he will be fully recovered.



Resource List

Stop TB Partnership

Stop TB Partnership, MSH/RPM and the World Bank. Building an evidence base on the role of incentives and enablers in improving TB control programmes? Summary of findings to date, October 2003

Stop TB Partnership, MSH/RPM. Workshop on evaluating enablers and incentives in TB control. Paris, France, November 3-4, 2003

Stop TB Partnership/WHO, MSH/RPM and the World Bank. Can enablers and incentives improve the performance of TB control programs? Summary report on the first phase (2001-2002) of a collaborative activity

World Health Organisation (WHO)

Sustainable financing for TB prevention and control, Fifty-eighth World Health Assembly, A58/A/Con.Paper No.6, May 2005

Toman's Tuberculosis: Case Detection, Treatment and Monitoring, Questions and Answers, Second Edition, WHO, 2004

Raviglione, M.C. (2003): The TB epidemic from 1992 to 2002, Tuberculosis, 83 (Proceedings from the 4th World Congress on Tuberculosis, June 3-5, 2002), Issues 1-3
www.who.int/gtb/TBHIV/montreux

Addressing Poverty in TB Control: Options for National TB Control Programmes WHO/HTM/TB/2005.352

Revised international definitions in tuberculosis control: Int J Tuberc Lung Dis 5(3): 213-215

Report 2007, Global Tuberculosis Control: Surveillance, Planning, Financing. WHO/HTM/TB/2005.349

Report 2005, Global Tuberculosis Control: Surveillance, Planning, Financing. WHO/HTM/TB/2007.376

Bergstrom *et al.* Training for Better TB Control, Human Resource Development for TB Control. A Strategic Approach Within Country Support, WHO/CDS/TB/2002

Community Home-Based Care in Resource-Limited Settings: a Framework for Action, 2002

Strategic Direction for Tuberculosis Research, February, 2002

Disease information, World Health Report, 2001

Involving Private Practitioners in Tuberculosis Control: Issues, Interventions and Emerging Policy Framework. WHO/CDS/TB/2001.285

Annual Report 2004, WHO, Southern Sudan Office

The Stop TB Strategy. WHO/HTM/TB/2006.368

World Food Programme (WFP)

WFP Executive Board Paper: Programming in the Era of AIDS: WFP's Response to HIV/AIDS, www.wfp.org

S.Gillespie, L.Haddad, R.Jackson. HIV/AIDS Food and Nutrition Security: Impacts and Actions. May, 2001.

Getting Started: HIV/AIDS Prevention Education in School Feeding Programmes, May 2004

Getting Started: WFP Food Support to the Prevention of Mother-to-Child Transmission of HIV and Related Programmes, October 2004

Food Assistance and HIV/AIDS. Ration design considerations, 2007

Joint Emergency Food Aid Programme (JEFAP) EMOP 10290. HIV/AIDS Project Implementation Guidelines. WFP Malawi & Partners, July 2003.

The first Line of Defence. Why Food and Nutrition Matter in the Fight Against HIV/AIDS, 2003

Proposal for food commodities in support of MOH Kassala to manage TB patients, WFP Sudan, 2005

Appui Alimentaire aux initiatives de prise en charge des personnes vivant avec le VIH/SIDA au Burkina, WFP Burkina Faso, May 2003

Document de mise en oeuvre: Soutien alimentaire aux patients tuberculeux par la PAM sur financement du Fonds Mondial pour la periode 2005-2009, WFP Burkina Faso

World Bank

Annual Report, 2002, chap 0402.htm

Evaluating the World Bank's Assistance for Fighting the AIDS Epidemic, 2005

Eichler, R., Weil, D., Can incentives improve public health performance? February 2002
www.worldbank.org/wbi/B-SPAN/sub-incentives.htm

Global Plan to Stop Tuberculosis, October, 2001

Case study of food support to TB patients in Cambodia. Food Aid for Development: Challenges and Opportunities. A workshop for WFP and World Bank staff on the use of food aid, July 2003

Weil D., Mookherji S., Food Support to Tuberculosis Patients under DOTS. A case study of the collaboration between the WFP and the National TB Control Programme in Cambodia, December 2002

Weil D., Mookherji S., Potential for a stronger WFP-World Bank partnership in fighting TB in Asia, May 2004

Others

De Cock, K., The New Tuberculosis (Again): The rationale for collaborative TB/HIV Activities. HIV/TB Satellite Symposium, 13th International Conference on AIDS and STIs in Africa (ICASA), Nairobi, 2003

Health Initiative. TB and poverty in the context of global TB control. Highlights of satellite symposium on TB and poverty, 11-12 October 2002, Montreal, Canada

Ministry of Health and Welfare of Lesotho. Implementation plan for Global Fund monitoring, evaluation, reporting and data management for tuberculosis, 2005

Ministry of Health and Welfare of Lesotho. The National Strategic Plan on Tuberculosis for Lesotho 2005-2009

Ministry of Health and Welfare of Lesotho. Report of a Comprehensive External Review of the National Tuberculosis Programme of Lesotho, March 2004

Ministry of Health of Sudan. Annual Progress Report 2004, National Tuberculosis Control Programme

Paul Farmer, Statement from Partners in Health and Zanni Lasante on current events in Haiti.
www.pih.org/haiti-feb24.html

Van Lettow et al, Triple Trouble: The Role of Malnutrition in Tuberculosis and Human Immunodeficiency Virus Co-infection, March 2003



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