Dots at the Workplace

Guidelines for TB Control Activities at the Workplace

World Health Organization
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Contents

Foreword

The South-East Asia Region has several valuable assets—a large workforce is one of them.

To create a more productive workforce has been the goal of every employer. The business sector today, I am pleased to say, is increasingly realizing the value of health in achieving this goal.

Tuberculosis is a workplace issue, affecting thousands of workers in the prime of their lives, impacting severely on their health and well being, their families and the communities within which they live.

For employers, TB in workers results in huge losses due to long absenteeism, low productivity and costs for treatment.

The DOTS strategy to control tuberculosis is now finding a prominent place in several leading industries. Experience from around the world has shown that the strategy is both feasible and effective. It has cured workers of TB and got them back to work within much shorter periods of time than was previously possible. In addition, it has prevented the spread of TB among others in the workplace, saving the industry from the huge losses incurred due to TB.

The guidelines set out in this booklet describe the principles on which to base the DOTS programme and the steps to be taken to establish it.

I appeal to the corporate sector, as a loyal and committed partner, to take this initiative forward and to implement "DOTS at the Workplace" to fulfill humanitarian needs, business interests, national goals and the global targets to stop TB.

Dr Uton Muchtar Rafei
Regional Director

1

Tuberculosis : The Relentless Spread of a Defiant Disease

Tuberculosis—a disease that has for centuries struck millions of men, women and children all over the world, still remains one of the most defiant public health problems of our times, spreading relentlessly and killing more adults than any other infectious disease.

TB is a global emergency. Nearly two million people die every year from TB and despite national TB control programmes operating in many countries, eight and a half million new cases appear each year to challenge public health. Tuberculosis spells wreck and ruin not only to individuals and families, but also to societies and nations, seriously affecting work productivity, family cohesiveness and greatly weakening national incomes. TB respects no boundaries; it can affect any person, although the most vulnerable are those who are in extended and closed indoor contact with a case of active TB. The poor are especially at high risk, living within adverse health conditions in congested, ill-ventilated homes. Those who work in unprotected environments and in occupations that expose them to increased risk of TB are also more vulnerable.

The South-East Asia Region bears the major brunt of the global TB burden harbouring 38% of the world's TB cases. Poverty, increasing migration, homelessness and the compulsions to live and work in high risk environments are making people increasingly susceptible to the disease. Each year the Region sees three million new cases and loses 750 000 lives due to TB (Figure 1).

TB is now poised to explode into an even more formidable challenge due to the parallel epidemic of HIV/AIDS currently sweeping across Asia.

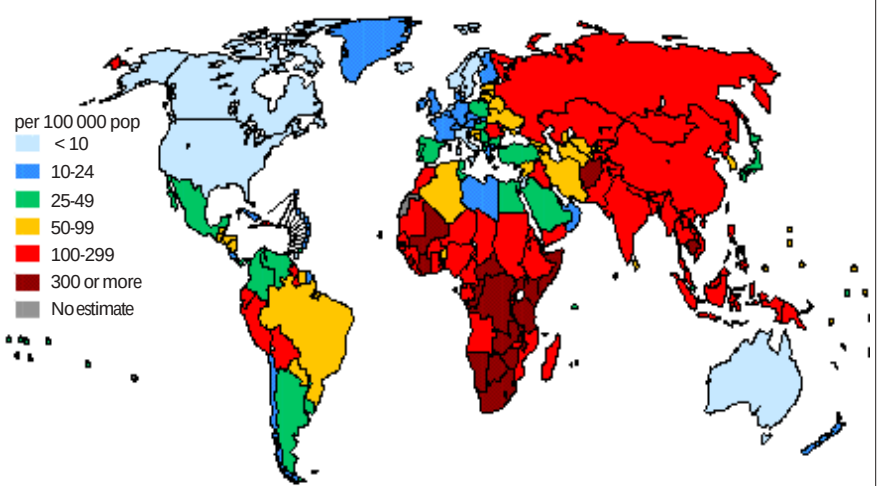
HIV reduces the capacity of the body's natural immune system to fight disease. The risk of developing active TB is thus several times higher among HIV-positive individuals as compared to those uninfected with HIV.

Fatality rates are also higher in HIV-infected TB patients and the progressive weakening of the immune system due to HIV, predisposes HIV-infected TB patients to TB recurrence even after a successful course of TB treatment. TB has thus emerged as the most common life-threatening opportunistic infection seen in HIV-infected persons accounting for at least one-third of AIDS deaths worldwide and 40% of AIDS deaths in Asia.

In the 11 countries that comprise the South-East Asia Region of WHO, over two million people are currently estimated to be co-infected with both HIV and TB and between 50 to 82% of AIDS cases diagnosed in India, Myanmar, Nepal and Thailand have TB. With rising rates of HIV infection, the situation is expected to worsen.

Another problem that merits serious attention is the appearance of multi-drug resistant TB [MDR-TB], a condition that is appearing in a number of countries, making TB control even more difficult. MDR-TB develops when the bacilli that cause TB become resistant to some of the essential drugs used to fight it. This resistance develops when TB treatment is administered incorrectly, partially or inconsistently. MDR-TB is much more

Figure 1: ***Estimated TB incidence rates in the World***



The designation employed and the presentation of material on the map do not imply the expression of any opinion on the part of the World Health Organization concerning the legal status of any country, terriroty, city or area or of its authorities, or concerning the delimitation on its frontier or boundaries. White lines on the map represent approximate border lines for which there may not yet be full agreement.

difficult to treat, with the patient having to take expensive and more toxic drugs for a much longer period of time , sometimes as long as two years, as compared to the usual treatment regimen of six to eight months.

TB incurs tremendous costs, both economic and social. Human lives are lost during their most productive years. Families break up. Children stop going to school. Many patients, especially women, suffer humiliation and are even abandoned. Household incomes drop as much as 20 to 30 %. The poor get poorer.

The industrial sector bears a heavy load of these losses. In many workplaces, employees operate in closed spaces and unprotected environments which carry high risk of the disease spreading from those having active TB to other employees working in close proximity. Those working in mines, construction work, stone crushing and in other similar occupations where there is a greater level of exposure to silica dust are also specially vulnerable.

The facts as we know them

- 95% of the world's 20 million people suffering from tuberculosis live in developing countries.
- The financial losses on account of TB are estimated at over US $ 6 million per year in the South-East Asia Region.
- TB leads to a decline in worker productivity of the order of US $ 12 billion annually.
- Studies suggest that on an average, an affected employee loses 3-4 months of work, resulting in potential losses of 20-30% of annual household income.
- Fifteen years of household income is further lost as a consequence of the premature death of the persons affected.

2

DOTS : The Best Way to Stop TB

DOTS stands for Directly Observed Treatment, Short-course, internationally recognized as the most cost-effective intervention available today to control tuberculosis.

The DOTS strategy consists of five elements:

- Political commitment;
- Good quality case detection using sputum smear microscopy in persons who have cough of over three weeks' duration;
- Short-course chemotherapy using standardized regimens and recommended case management protocols including direct observation of treatment;
- Regular supply of good quality anti-TB drugs, and
- A standardized recording and reporting system that allows an objective assessment of individual patient outcomes as well as overall programme performance.

If implemented effectively, the DOTS strategy attacks TB on many fronts.

It reduces transmission and therefore, prevents the spread of TB right at the source; it decreases the risk of patients developing resistance to

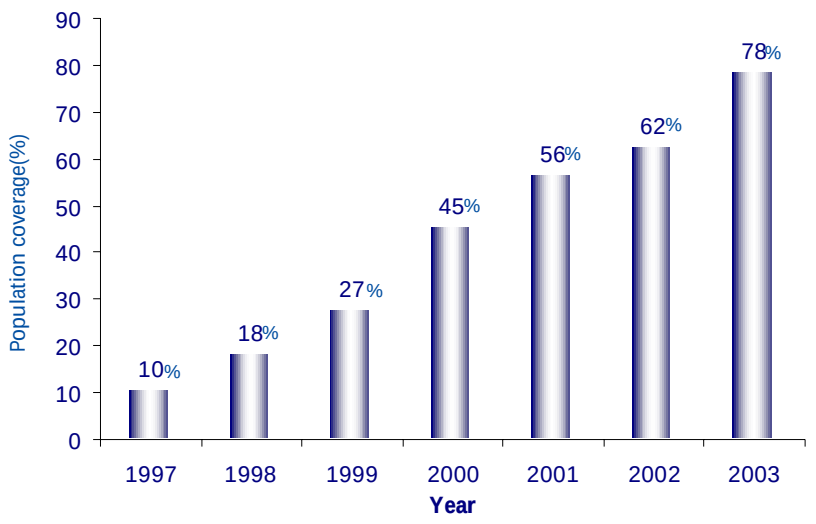
anti-TB drugs and reduces the risk of treatment failures in TB patients. It also decreases the chances of relapse and death due to TB.

The DOTS strategy promises to mitigate the huge losses incurred by TB, both in terms of human lives and money. The strategy guarantees cure and prevents the development of the more serious multi-drug resistant TB. Now a norm for TB control in over 120 countries of the world, the DOTS strategy which packages simple technology with good management practices is designed to:

- detect new cases of TB through sputum tests performed on TB suspects, who report with cough of over three weeks' duration;
- guarantee uninterrupted supply of approved anti-TB drugs as standardized short course chemotherapy under recommended case management protocols;
- guarantee that the patient takes the drugs by having someone like a health worker or a trained volunteer watch the patient swallow the drugs, and
- carefully monitor each patient's progress until he or she is cured.

The success of DOTS has been acclaimed worldwide. Wherever it has been fully implemented, cure rates of over 80% have been recorded, in the resource-constrained countries of the world.

Figure 2. ***DOTS implementation in the SEA Region***



DOTS is becoming a household word in the South-East Asia Region. There is strong government commitment to the programme. Cure rates of over 85% have been reported in areas where it has been implemented. The success of DOTS has attracted a number of sectors to collaborate with the government as active partners in TB control. The private medical sector, NGOs, industry and others have begun to pool their efforts to make DOTS available and accessible to wider constituencies in the countries of the Region. DOTS has now reached over 70% of the Region's population (Figure 2). The target set is to achieve 100% coverage by the year 2005.

3

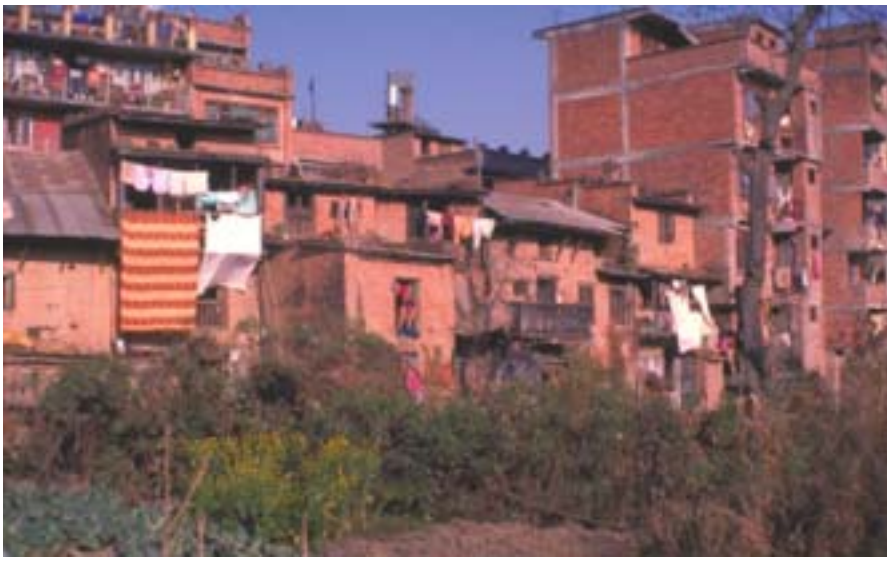
The Workplace : A Most Appropriate Setting for DOTS

The workplace is one of the most appropriate settings to implement DOTS. It addresses the health concerns of a large vulnerable group in the population. TB affects people of all ages, but the hardest hit are those between 20 and 45 years of age, men and women who are at work, during the most economically productive years of their lives. Out of 2.5 billion people in employment worldwide, nearly 10 million are at risk of developing active TB in their lifetime. Few work in settings that offer a comprehensive package of quality health services.

At most workplaces, whether they be factories, small scale industries or any other kind of business venture or setting where people work, the spectre of TB has not merely stalked vulnerable employees, but it has also challenged growth-oriented employers to find a cost-effective and doable strategy that will not only mitigate the suffering and loss of life caused by TB, but also drastically reduce the costs incurred by TB in the workplace.

The business sector has in fact a large stake in controlling TB. The illness imposes great costs to employers with disruption of work and reduced productivity, high treatment costs, and in addition, significant indirect costs that are expended for replacement and retraining of workers.

Several examples from across the world have shown that the strategy is both feasible and cost-effective for reducing the spread of TB in the workplace. The DOTS programme can well be built on the existing health



An overcrowded industrial housing estate

services being offered to workers and sustained through supervision and monitoring of all TB cases through management systems which are usually in place at workplaces.

There are, of course, workplaces that are devoid of any kind of health facilities for workers. In fact, the vast majority of the working population in the Region earn their living working in the unorganized sector under unhealthy working conditions with low wages and little job security. These are the groups that are even more vulnerable to TB and therefore, need to be addressed on a priority basis. In partnership with the national TB programme as well as with NGOs and the socially conscious corporate bodies, the need for a programme to make DOTS accessible to such workers is urgently felt.

DOTS at the workplace holds promise to make a major contribution in the building of a healthier and stronger workforce. Supported by the government's national TB programme, enlightened and committed workplace management, hand in hand with dedicated staff and trusting employees can make this happen.

4

DOTS at the Workplace: A Win-win Situation

DOTS at the workplace presents a unique example of a win-win situation benefiting employers, employees, families, communities and nations.

DOTS reduces the impact of TB on workers and their families

A diagnosis of TB has serious impact on the worker. It implies prolonged illness, frequent periods of absenteeism from work, loss of wages, sometimes even loss of job and other forms of discrimination. Family members also suffer. Apart from being at a higher risk of getting infected due to close contact with the infected case at home, a reduction in household income adversely affects the health and well being of the family. For example, children in TB affected families are known to be withdrawn from school to supplement household incomes.

When TB affects women workers, the impact is even greater. Women generally have poorer accessibility to health services, face greater discrimination and get lesser family support in times of illness especially when they suffer from diseases like TB and HIV/AIDS, which still continue to carry stigma and shame in many societies.

The spread of TB at the workplace can be stopped

TB spreads easily when an infected case is in close contact with others, as is often the case in ill-ventilated, closed workplaces. It has been estimated that the most infectious form of TB will infect about 20 others in his or her lifetime.

An untreated or improperly treated case of TB thus carries great risk to other workers.

Employers benefit from greater work productivity and profits

Providing DOTS at the workplace raises productivity through reducing absenteeism and increasing worker's efficiency. TB affects business interests in a major way. For example, a large gold mining industry located in South Africa estimated that each case of TB among its unskilled employees in some of its operations cost as much as US $410 in lost shifts.

On the other hand, treating TB through the DOTS approach can cost the employer as little as US$ 10 per patient. With fewer TB deaths, the industry also saves on expenditure incurred for hiring and training new recruits.

The Company gets the opportunity to raise its image and show that it cares

A well planned DOTS at the workplace programme provided with empathy and concern is a dignified way of letting people know that employers care for the health and welfare of their staff. Apart from its health benefits, it also boosts the morale of the workers when they are made to realize that having TB is not the end of a working life. The disease can be completely cured with the worker back to normal duties after a couple of weeks. There is no shame or stigma attached to the disease. When employers spread the message of non-discrimination and back it with their workplace policies, the impact is even greater. It spreads far beyond the workplace, developing in families of workers, a new hope and confidence and in the community, greater involvement and support to the DOTS programme operating in their districts. TB is a major contributor to ill health and poverty in a country. By addressing such an important national issue, employers are also able to demonstrate their corporate social responsibility, improve their 'brand' image as a progressive and socially relevant organization and take pride not merely for the profits made, but also for the valuable contributions they are making to national interests and society at large.

Countries come closer to achieving national targets

By widening the access of DOTS through enlisting the business sector, countries come closer to achieving the national targets set by their governments, which are to cover the entire population of the country with DOTS by the year 2005; detect at least 70% of the estimated new

sputum smear positive cases; cure at least 85% of all newly detected sputum smear positive cases, and reduce TB deaths by at least 50% by 2010.

DOTS at the Workplace – Who Benefits?

Employees benefit from the decisions taken by management to implement interventions that will avert the spread of TB in the workplace, through timely and supervised attention to all those suspected and suffering from TB.

TB cases benefit from easy access provided to diagnostic and treatment facilities as well as supervised chemotherapy. They also benefit from the education programmes carried out in the workplace aimed at reduction of stigma and discrimination of those infected.

Families benefit from the decreased risk of the spread of TB among family members. They also benefit from the undisrupted household incomes, allaying their fears of deprivations associated with a long drawn out illness in an earning member.

Employers benefit from greater work productivity and profits as an outcome of a healthier workforce. There would be less labour turnover due to fewer deaths and less expenditure on replacing and training new workers. In addition to this, there are other value-added benefits. The initiative shows great potential for business and industry to demonstrate their concern for the health and welfare of their employees, and to contribute meaningfully to attain the goals of one of the most important national health programmes of the country.

Communities benefit from a healthier and therefore, a more prosperous environment, vital elements necessary for building harmony and peace.

The national TB programme benefits through enlisting the business sector to extend the reach of its DOTS programme more widely to help it achieve its target of covering the entire population of the country with DOTS by the year 2005.

The nation benefits by controlling one of its most impoverishing diseases among people who are at the peak of their earning lives and the largest contributors to the national economy.

5

Implementing DOTS at the Workplace

5.1 Guiding Principles

Building commitment and dedication

Commitment must come from all levels - from top management to the lowest paid worker, from workers' unions and even from workers' families. This is important when establishing a new programme that relies heavily on management and union support, skills of health personnel, workers' compliance and family cooperation.

Commitment on the part of management must be real and reflected adequately, not merely in budget allocations, but also in their endorsements and approvals of policies related to TB control at the workplace and in the statements they make that express the value they place on the health and wellbeing of their workers.

Developing a workplace policy

A workplace policy on TB is essentially based on national policy and legislations if such exist. The policy should be developed and formalized in consultation with all stake holders including officials of the national TB programme, corporate management, departments of trade and labour, industrial health professionals, employees unions and communities. It should be based on the principle that workers have a right to work in environments that do not pose undue hazards to health and that employers have the responsibility to implement measures that decrease the occupational risk of TB. The policy should guarantee that no employee would be dismissed on

account of having TB. It should also guarantee a healthy work environment that will prevent the transmission of TB, ensure non-discrimination, confidentiality, equal opportunities for employment, ready access to treatment, and permission for time off for treatment and job modifications, when necessary. The policy must be clearly explained to all TB patients and applicable to all, regardless of age or gender.

Since TB and HIV are so closely linked, the workplace TB control policy should also consider providing integrated TB / HIV services instead of separate services, which in the long run, will be more expensive to operate. The policy should be sensitive to the concerns of HIV-infected employees, particularly with respect to testing and confidentiality. HIV testing should only be done after informed consent has been obtained and include pre and post test counselling by trained counsellors.

Implementing DOTS as part of the ongoing health service

The introduction of DOTS services into the various workplace settings should as much as possible, utilize or build on existing facilities or arrangements that are already in place to provide health care to employees in their respective work places. These services must be easily accessible to all workers during their various shifts. Employers must allow employees time to seek care for their ailments and also facilitate the process of their diagnosis. It is important that the staff is fully conversant with both the workplace policy as well as with the policy and guidelines of the country's

An informal training session of health workers in progress

national TB control programme. Adequate training must be provided to the health staff on how DOTS should be implemented, including the procedures on recording and reporting.

If on-site facilities are not available, employers must provide access to workers suffering from TB to avail of the nearest DOTS facility in consultation with the local staff of the national TB programme.

In the case of HIV-infected TB patients, administration of drugs that will reduce the incidence of other opportunistic infections will also have to be considered.

Providing a safe workplace environment

Airborne transmission of the TB germs, the cause of most TB cases, is enhanced when workers are confined to small, enclosed spaces. Those working in mines, construction activities and or in occupations that expose them to high levels of silica dust are also at greater risk and therefore, need special environmental protection such as systems that cause a high flow of fresh air into the workplace environment.

Establishing collaborations

DOTS at the workplace must work in close collaboration with the national TB programme, ensuring that national policies and guidelines are followed with respect to both diagnosis and treatment. Collaborations with employees' associations are most useful for getting the needed support for the programme and feedback on its implementation. As most workplaces may not have well established medical services on site, collaborations with nearby government health facilities must be sought and formalized. All such partnerships must be based on mutual trust and understanding. Collaborations are more likely to succeed when the benefits of such partnerships are shared equally between the partners, giving each partner a sense of shared ownership of the programme.

Respecting the rights of patients

Patients must have the right to demand that their reports and records are kept confidential by the health staff and not disclosed to the management or others. Treatment compliance is much more likely to succeed if this is respected. If the illness entails a change in the nature of the work or necessitates some time off for the patient, it is the duty of the health staff to advise the management about this, without disclosing the reason.

Mandatory HIV testing on TB cases or for that matter on any person is an infringement on the rights of patients. HIV testing must not be carried out without informed consent.

Providing social welfare benefits to patients and their families

TB is a chronic disease which involves taking daily medicines for at least six months. Even if the drugs are provided free of cost, there are often other expenses incurred due to loss in wages as the result of absenteeism from work, transportation costs and money spent on nutritional supplements. These are often deterrents to successful compliance of treatment regimens.

Social welfare benefits like free treatment, maintaining salary during treatment, free transportation to health facilities and food support are important incentives to help workers complete the treatment.

Strengthening health promotion and education

Information and education programmes to raise awareness among workers on TB and other commonly prevailing diseases must become part of the activities of the workplace. Workers must have easy access to user-friendly informational material in the language commonly spoken at the workplace.

In the case of TB, special efforts must be made to demystify TB, to remove the stigma attached to the disease, to explain its signs and symptoms and to persuade workers to come forward for diagnosis if they have any of the symptoms. The message must be clear.

"TB is both treatable and curable"

At the treatment centres, talks must be given, preferably with the help of posters, flashcards and other audiovisual aids to explain the nature of the disease, to remove misconceptions and strongly emphasize the need to adhere to diagnostic and treatment schedules throughout the course of the illness. There is also an obligation for the health staff to boost the morale of patients by mitigating their sense of despair and hopelessness and in its place inculcating in patients a feeling of hope and promise of a productive and normal life in the future.

All such communications must be an interactive process, providing ample opportunities for patients to question and to present their views and concerns. Such interaction will also enable staff to assess if their messages have been correctly understood as well as to identify and address

Information and education activities

constraints if any faced by employees, either at work or at home with respect to their treatment.

Undertaking monitoring and review

The programme must be closely monitored for quality and compliance in order that quick remedial action can be taken if problems arise during implementation. The progress of each patient must be reviewed on a regular basis and defaulters traced promptly.

Regular reports must be sent in standardized formats to the national TB programme as well as to corporate management.

Recognizing and rewarding success

Workers who have successfully completed their treatment and have been declared cured must be suitably rewarded. This can be done either privately or publicly, depending on whether the worker wishes to make his or her identity known. When it is done publicly, the opportunity must be taken to further educate employees on TB and how important it is for TB suspects to come forward for diagnosis without feeling shame or guilt or the fear of being stigmatized.

Equally important is the need for the national TB programmes to publicly acknowledge the commitment and initiative taken by businesses or industries in addressing the problem of tuberculosis in their workers—a disease that not only has serious medical implications but also grave socioeconomic consequences.

5.2 Building on Existing Opportunities

The workplace offers unique opportunities to establish and implement the DOTS programme, opportunities that wait to be harnessed and built upon to lay the foundations for a sound and sustainable programme.

Tuberculosis is an important disease causing great suffering among workers, especially among those who work in high-risk occupations. It spells long months of suffering, long periods of unemployment, family disharmony and societal exclusion. Access to a well managed TB programme at the workplace which not only promises to detect and cure all infectious cases through a short course of therapy, but also dispels misconceptions about the disease among other workers, is envisaged to meet a long felt need of workers.

The business sector has a captive population and is therefore much more easily approachable for advocacy as well as for their participation in a new programme. Management and communication systems, as well as monitoring and reporting systems are in place. In many places, workers are unionized to provide a formal platform to represent their needs and views. Workers' education and training programmes offer further opportunities to elicit the active participation of employees in the DOTS programme.

With respect to health services, many of the large business enterprises in the Region are already offering health care to their employees at centres they have set up in their work premises. Medical infrastructure, staff and budgets exist in such set-ups. Several of them also offer TB treatment services and health education to raise awareness among workers on TB and its prevention. Training of the existing health staff and provision of extra supplies may be the only additional investments required, if they have not yet implemented the DOTS programme. In collaboration with the national TB control programme, DOTS can be introduced into the existing services. However, a large proportion of the workforce in the Region and especially those working in the informal sector may not enjoy such facilities. In such cases, arrangements to refer workers to the

nearest DOTS centres should be made and support provided to patients during their treatment. If the DOTS facility is not available locally, employers should negotiate with the national TB programme to provide one for its workers.

5.3 Steps to Establish " DOTS in the Workplace"

Undertaking a situational analysis

A situational analysis is the first step in implementing the DOTS programme. This will provide management with the necessary information to plan the programme by assessing the extent of the TB problem in the workplace, the existing services being provided, diagnostic procedures and treatment being practised, the availability of trained health staff and the channels available to collaborate with the national TB control programme.

Advocacy

As with any new initiative, extensive advocacy efforts are needed to convince all stake holders - management at various levels, health staff, workers and their unions and other interested parties, of the benefit of DOTS. This may involve extensive dissemination of informational and educational materials through meetings and other communication channels, explaining the dangers of undiagnosed and untreated TB and how the newly proposed DOTS programme will benefit both employees and employers.

Formulating Policy

A policy on DOTS in the workplace should be formulated in line with the national policy if such policy exists, which also takes into account the guiding principles set out for its implementation and sustainability. It is important to continue to involve all stakeholders, including NGOs and workers' union representatives in this exercise to ensure that the policy incorporates the interests of both workers and management. The policy should reflect the various concerns related to discrimination and confidentiality as well as free and ready access to DOTS.

Drawing up an Action Plan

An implementation programme should be planned in collaboration with the health services staff at the workplace and preferably also with the national TB programme staff and a feasible action plan drawn up, based on the situational analysis and the resources available to implement it.

Implementing the Action Plan

This will include a range of activities:

Detecting TB cases in the workplace

This involves first identifying those suspected of having TB, followed by confirming the diagnosis through tests.

- A persistent cough of three weeks or more is an important symptom of lung TB. Expectoration of sputum, especially if it is blood stained, is another important sign.
- A TB suspect may also complain of loss of appetite and weight, night sweats and fever, general fatigue and weakness, chest pain and shortness of breath.
- The diagnosis of lung TB is confirmed through examining a smear of the patient's sputum under a microscope to detect the presence of TB bacilli. While a chest X-ray will spot the disease in most cases, diagnosis primarily relies on sputum tests.

Early and accurate detection of infectious cases is vital to prevent the further spread of TB. It will also prevent prolonged illness, treatment failure, and/or the development of multi-drug resistant TB.

A laboratory technician undertaking sputum microscopy

In case diagnostic facilities are not available at the workplace, suspect cases should be referred to the nearest health facility for these tests. It is useful for employers to build good working relationships with such facilities and make their policies known to them, particularly regarding the need to maintain confidentiality.

Treating all detected cases with good quality drugs

There are basically five anti-TB drugs used in various combinations depending on the diagnostic category the patient falls under. These drugs are isoniazid, rifampicin, pyrazinamide, streptomycin and ethambutol.

During the initial intensive phase of treatment which lasts two months, the aim is to kill the TB bacilli rapidly. At the end of this phase, symptoms disappear or at least get markedly reduced. The aim of the maintenance phase which lasts for the next four to six months is to destroy any lingering bacilli that could trigger a relapse of the disease.

It is most important that this entire short course chemotherapy schedule extending for a total of six to eight months is given according to the standard TB regimens recommended by the national TB programme of the country and the drugs that are given are of good quality.

Poor drug quality can result in treatment interruptions and/or development of multi-drug resistant TB.

Ensuring that all TB cases adhere to the recommended treatment schedule

- A major contribution of an effective DOTS programme to TB control is that it ensures that a patient completes the treatment as prescribed.
- Non-adherence to treatment is likely to lead to treatment failure. It is also likely to lead to drug resistance which is much more difficult to treat.
- There is evidence today that as much as 30% of all patients who self-administer their drugs without supervision do not adhere to treatment schedules in the first two to three months of treatment.

One of the most effective ways to prevent such defaults is to directly observe the patient swallowing the anti-TB drugs that are given. This is done at the DOTS centres. Observation can be done by anyone with a little training. This role is usually taken on by a member of the health staff; however, in outreach DOTS centres, community volunteers are also recruited for this purpose. Whoever the observer may be, it is important that he or she understands the rationality underlining DOTS, and is accountable to the programme.

Other important factors that facilitate adherence is how effectively the patient has been convinced of the need for treatment on a daily basis for six to eight months. This involves good interpersonal communication, explaining to the patient what drugs are to be taken, and for how long and why it is important not to interrupt treatment. The possible side effects the drugs may produce must also be mentioned with the assurance that this problem if reported to the health staff in time, can be dealt with appropriately.

When services and drugs are given free of charge, DOTS centres are easily accessible and convenient to attend and the worker continues to get a salary and other benefits, adherence to treatment is much more likely to succeed.

Guaranteeing an uninterrupted supply of good quality anti-TB drugs

Drug requirements must be realistically ascertained and their procurement planned well in advance to ensure an uninterrupted drug supply. Close collaboration with the national TB programme of the country is essential to procure good quality drugs at low prices.

All other efforts to implement DOTS will prove futile if this basic step is overlooked.

Drugs being administered by a treatment observer

Establishing recording and reporting systems

Recording and reporting systems must be compatible with those of the National TB programme and are best established with their collaboration. This involves the following:

Recording

- Maintaining a laboratory register of all those suspected and diagnosed as having TB;
- Filling a Patient Identity Card for every case of TB .

This card which is kept with the patient, records the following:

- patient's identity;
- diagnostic category;
- type and form of TB;
- the selected TB regimen and dosages;
- the date when treatment was started;
- sputum examination results;
- TB register number;
- name of health centre delivering treatment, and
- date of follow-up appointment.

A TB treatment card essentially contains the same information as the patient identity card, plus additional information related to the daily monitoring of drug administration. This card is also used to declare the outcome of treatment. The card is maintained by the health centre and is used to enter data regarding the patient in the TB treatment register, information from which is then transcribed to compile the quarterly and annual cohort reports required by the national programme.

Reporting

The WHO standard reporting system includes the laboratory and the treatment registers, quarterly reports on case-finding and a quarterly report on treatment outcomes. Reports must be sent regularly to the national TB programme.

Regular review and monitoring

The management should closely review and monitor progress together with the national TB programme staff of the country in order to take quick remedial action when required and ensure both the cost-effectiveness and quality of services being provided.

6

Industry Shows the Way

For many industries all over the world, TB control at the workplace is not entirely new. Concern for TB has been demonstrated in many different ways—through provision of free drugs and nutritional supplements, health education programmes, counselling and follow-ups and by extending TB services to the family and the wider community through the industry's outreach services and community development projects.

Two well documented projects are described below.

6.1 The AngloGold TB Programme, South Africa

AngloGold is a large international gold mining company with operations in Africa, North and South America and Australia. Approximately 44 000 of its 50 000 employees work in South Africa, in an area where TB prevalence is high. The prevailing high HIV prevalence rates further aggravate the TB problem.

Between 1990 and 2001, the number of active cases of TB increased by about 8% every year. This imposed a sharp rise in the company's TB related expenditure. Each case of TB cost the company US $2 775 and the cost of lost shifts among lower level employees was about US $410 per case.

In 2001, AngloGold budgeted US $3.8 million for their TB programme, focusing on detection and care of TB in line with the WHO-recommended

DOTS strategy, national TB guidelines and South African laws. In addition, AngloGold's TB Programme included active case-finding undertaken through tracing and investigating the contacts of TB cases. Regular symptom screening of employees every six months was also carried out followed by radiology for those suspected to have TB. More frequent screening was conducted for those employees who were HIV-positive. For all suspected cases, at least two sputum specimens were examined microscopically and further cultured to detect the presence of the TB bacilli.

The company established its own workplace laboratory for sputum collection and testing and an X-ray facility for radiological diagnosis.

Patients were treated using standardized drug regimens and records of case-finding and treatment outcomes are maintained for reporting. Directly observed treatment was undertaken throughout the period of treatment. Cure rates are as high as 88% and case detection rates have gradually increased over the past 10 years.

A unique element of the TB programme has been its close links with the company's HIV/AIDS Programme. On the one hand, HIV-infected workers undergo active TB detection programmes and on the other, all TB patients are encouraged to attend voluntary counselling and testing [VCT] for HIV. A study analyzing the cost benefits of such an approach indicates that while an HIV VCT programme combined with the company's TB detection and prevention programme would cost US $ 90 per employee, it would generate US $105 per employee in benefits, by preventing active TB in 50 % of the HIV-positive workers.

There are other unique elements in AngloGold's TB programme. Both employees and their dependants are eligible for free TB diagnosis and treatment. Services cannot be terminated on account of TB and employees continue to receive normal wages while on TB treatment.

At AngloGold, top management and the company's employees are committed to the TB programme and in future, aim to increase its interventions and improve its effectiveness in controlling tuberculosis at the workplace. It also proposes to share best practices and advocacy materials with other interested companies.

6.2 The Youngone Industries TB Programme, Bangladesh

Established in 1988, Youngone Sports Shoe Industries Ltd, a company of the Republic of Korea, is the largest employer in the Chittagong Export

Processing Zone in Bangladesh with about 22 000 employees, 85% of whom are women between 18 to 30 years of age.

In 1996, the Chief Medical Officer identified TB as a serious problem affecting the health of the workers. In partnership with the National TB Programme of Bangladesh, a TB control programme was designed and the WHO-recommended DOTS strategy implemented.

A team of 10 doctors, 15 nurses and 40 health counsellors received training in the detection and management of TB. Counsellors encouraged workers who had a cough of more than three weeks' duration and loss of appetite to come forward for TB screening. They were then referred to the local government hospital for diagnosis. A workplace laboratory for sputum collection and microscopy was also established.

Health education programmes addressed the issues of fear, stigmatization and discrimination in addition to other aspects of TB prevention and control. Through home visits, counsellors motivated patients to continue their treatment. They also referred suspect cases of TB identified in the patient's family to nearby government facilities.

Diagnostic algorithms and treatment regimens adopted by Youngone's DOTS programme were consistent with those of the Bangladesh National TB Programme . Anti-TB drugs were supplied by the national programme free of charge to patients attending the Youngone medical centres. Records of each patient were maintained and quarterly cohort reports indicating the number of cases registered and treated sent to the national TB Programme.

In the year 2002, a hundred TB cases were diagnosed. Of these, 35 were sputum smear positive cases. All these converted to sputum smear negative cases by the end of two months, recording an impressive treatment rate of 88%.

What is unique about this initiative is that there is sustained commitment from management to TB control, with company policy clearly stating that no employee can be dismissed from service only because of TB.Employees are allowed to return to work in two to three weeks after the initiation of therapy or when their sputum becomes negative. All TB patients are given direct observation treatment at the company's medical centre and there has been no case of interrupted therapy.

7

Forging Partnerships

Committed and motivated partners to encourage, guide and support health programmes is essential for a programme's success. "DOTS at the Workplace" is no exception. It cannot operate in isolation. It needs support and interventions from a wide range of sectors, organizations and groups that have a stake in controlling TB and have the capacity and skills to do so.

National governments can play a lead role by endorsing a national policy on the introduction of TB control practices in the labour sector and, ensuring that the rights of those with TB are respected in terms of employment, education and social support.

National Tuberculosis Programmes have a lead role to play in:

- Developing a national framework for DOTS in the workplace consistent with national guidelines, in collaboration with business and industry representatives and regulatory bodies related to labour, social security etc.;
- Facilitating collaboration between industrial health services and local TB control staff;
- Monitoring and evaluating TB programme activities;
- Reporting programme results to the Ministry of Health and to WHO;
- Training and supervising staff involved in TB control activities;
- Providing drugs, diagnostic agents, and other supplies and ensuring free diagnosis and treatment;

- Information, education and communication activities for employees and to their employers, and
- Advocacy.

Confederations of Industry which have large memberships from the private as well as public sectors, including small and medium scale enterprises are also well placed to create and sustain the concept of healthy environments in the industrial context. Their experience in the social sector make them well equipped to coordinate and guide TB control activities amongst their members. They could help by:

- Preparing a list of various industries/factories and an inventory of available health care services;
- Promoting the adoption of DOTS by business and industries, and
- Helping with piloting and disseminating information on successful initiatives.

Employees' unions have a significant role in contributing to policy decisions concerning the DOTS at the workplace programme, cooperating with management in its implementation, educating employees on the importance of early detection and treatment of tuberculosis and eliciting their cooperation in utilizing the services offered by the programme.

NGOs and especially those involved with workers' health and welfare programmes can help through information and education activities, counselling services, fighting stigma and discrimination, counselling and providing volunteers for direct observation of treatment.

Employees are other important partners in ensuring the success of "DOTS at the Workplace". As the greatest beneficiary of this initiative, their role is critical in:

- Seeking help for any cough of more than three weeks' duration;
- Encouraging others, including family members to seek a diagnosis if symptoms of TB are suspected;
- Completing the prescribed treatment;
- Volunteering and encouraging colleagues and family members to act as DOT providers, and
- Helping to fight the social stigma associated with TB.

An innovative partnership at the global level is the **"Stop TB"** partnership which represents a coalition of stakeholders involved in TB control. This partnership supports countries in carrying out their mandates related to TB control. For example, the World Economic Forum supports employers in their activities against TB, HIV/AIDS and malaria. ILO promotes workers' rights, including health rights and WHO provides technical assistance to national programmes to implement DOTS. One of the immediate priorities of the "Stop TB" partnership is to expand the use of DOTS to all populations at risk.

STOP TB TARGETS

By 2005

- Cover the entire population of the country with DOTS by the year 2005
- Detect at least 70% of the estimated new sputum smear positive cases
- Cure at least 85% of all newly detected sputum smear positive cases
- Reduce TB deaths by at least 50 % by 2010

A more recent partnership initiative is the Global Fund to Fight AIDS, TB and Malaria [GFATM]. The Fund focuses on the three major diseases of poverty and in the case of TB, provides some of the resources needed to widen access and improve the implementation of DOTS in countries that carry a heavy burden of TB.

8

Conclusion

DOTS at the workplace provides employers with a unique opportunity to demonstrate its leadership role in partnering with the government to control tuberculosis. TB strikes hard at the working population, of men and women in the prime of their lives, struggling to seek a better future for themselves and their families.

The impact of TB is deep and wide. The disease not only takes a heavy toll on health and lives, it also contributes to big losses in national incomes and business profits. With the spread of HIV, the TB epidemic has grown even worse. In the South-East Asia Region where HIV is spreading faster than anywhere else in the world, the control of the disease poses an even more formidable challenge.

The DOTS strategy to control TB has met with astounding response all over the world. In the South-East Asia Region which bears the major load of the global TB burden, DOTS has achieved remarkable success in the areas where it has been implemented. However, considerable efforts are still needed to expand its reach and meet its target of covering the entire population of the Region by the year 2005.

The task is enormous; the government cannot do this alone. A unified collaborative approach with sizable inputs from several sectors, both public and private, is most essential. It is here that the corporate sector can most effectively step in. The corporate sector has in fact a large stake in controlling TB.

Work disruption due to death from TB and long absenteeism from work, treatment costs and doling out various welfare benefits to workers suffering from TB and to their families have serious economic implications for the company. Moreover, every untreated infectious case of TB is capable of spreading the disease to several other workers, compounding the TB problem in the workplace.

DOTS at the workplace meets both humanitarian and business compulsions. Many workers and especially those that are unskilled and employed in the large unorganized sector are from the poorer socioeconomic strata, least able to access and pay for health. DOTS at the workplace offers workers a guaranteed cure for a disease associated with long months of suffering and even death. A healthier workforce also means greater productivity and larger profits.

The many opportunities already available to implement DOTS must be harnessed. In several enterprises, an infrastructure already exists to provide medical care to the employees. DOTS can well be built on the existing services and in harmony and collaboration with the national TB control programme, guidelines can be framed and appropriate steps taken to implement the programme. In places where no such facility exists, arrangements can be made for referral to nearby DOTS centres for providing diagnostic services to all TB suspects as well as ensuring that the patient diagnosed as having TB is supervised and monitored throughout the course of treatment.

Establishing DOTS at the workplace would be “doing the right thing, at the right place, in the right way”. Investments in such a programme pay high dividends, both in terms of business profits as well as in raising the image of the company as a forward-looking organization that cares for the well being of its workers and their families. More than anything else, implementing DOTS at the workplace makes good business sense !