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Tackling HIV and TB

AKAP

Community education programmes are needed to reduce discrimination — for both TB and HIV infection.

A third of the world's population is infected with tuberculosis (TB). Every year three million people die from TB, mostly in developing countries where it kills one in five adults. Despite the development of effective anti-tuberculosis drugs, TB causes more deaths than any other infectious disease. It is now one of the main causes of death in people with HIV infection and, since the mid-1980s, has increased dramatically in developing and industrialised countries. Like HIV, having TB is associated with poverty and often results in discrimination and stigma, and abuse of human rights.

But TB can be cured. With correct treatment, people with TB — including those who also have HIV infection — are no longer infectious after two to three weeks and almost all are cured after taking appropriate drugs for at least six months. Without treatment more than half of those with TB are likely to die. Proper treatment also prevents the spread of TB because it makes people non-infectious.

What is TB?

Tuberculosis is usually caused by infection with the bacillus *Mycobacterium tuberculosis*. TB normally affects the lungs — this is called pulmonary TB. Sometimes the TB germs enter the bloodstream and spread to other organs in the body — this is called extra pulmonary TB. Pulmonary TB is much more common than extra pulmonary TB.

When a person is exposed to TB germs and becomes infected, they have TB infection (or latent TB). Sometimes the infection progresses to TB disease (tuberculosis, active tuberculosis or active disease).

Once infected with TB a person remains infected for the rest of their life. But most people do not become ill with TB disease and infectious to others. A healthy immune system can stop the germs from multiplying enough to cause illness. But the TB germs may continue to multiply and destroy the lung tissues, leading to active TB disease, particularly if a person is in poor health, or has HIV infection.

The symptoms of pulmonary TB disease are cough for more than three weeks (sometimes with bloody sputum) and chest pain. Exhaustion, night sweats, fever and weight loss are symptoms of both pulmonary and extra pulmonary TB.

Active pulmonary TB is the only form of the disease which is infectious, spreading from person to person via the air. The lungs of a person with active disease develop cavities (spaces) which are full of TB germs. When the person coughs or sneezes, large numbers of TB germs from the lungs are sprayed into the air in tiny droplets. Family, friends and health workers who have close contact with a person who has infectious TB are at greatest risk. TB spreads most easily in over-crowded and badly ventilated places.

(continued at next page...)

SPECIAL ISSUE
HIV and TB

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Continued from page 1

Sputum smear tests are used to find out if a person has active TB and is infectious. A positive sputum smear test means that a person is coughing up TB germs and should be treated.

A growing crisis

WHO has predicted a global TB epidemic, causing 30 million deaths during the 1990s. The number of new TB cases worldwide each year is expected to increase from around seven million in 1990 to over ten million by 2000. There are two main reasons why TB is a growing problem: neglect of TB programmes and the spread of HIV.

Effective TB control requires a properly functioning health service with good management, diagnostic facilities, trained staff and regular drug supplies including reserve stocks. But financing TB programmes has not been a priority.

There has also been little community education to tell people about TB symptoms, reduce discrimination and to encourage them to seek treatment.

In some places there has always been a stigma attached to TB. People risk losing their jobs and housing if it becomes known that they have TB. The stigma and stress may be worse for women. In some cultures, having TB may make it difficult to find a husband or result in divorce. Links between HIV and TB are worsening the stigma.

Worldwide the number of people infected with both HIV and TB is rising and will reach four million by the year 2000. About half of TB patients in sub-Saharan Africa are also infected with HIV. In Tanzania, TB cases doubled between 1983 and 1991, a third of them related to HIV. In Asia, TB is already one of the most important life threatening opportunistic infections associated with HIV. In Europe and North America the rise in TB cases since the mid-1980s is due partly to HIV, but also to other factors such as increasing homelessness and poverty, and worsening public health systems.

How do TB and HIV interact?

HIV and TB interact in several ways in individuals:

Reactivation of latent infection People who are infected with both TB and HIV are 25-30 times more likely to develop TB disease than people infected only with TB. This is because HIV stops the immune system working effectively and TB germs are able to multiply rapidly. In developing countries where many people are infected with TB and HIV, HIV-associated TB disease is very common.

Primary infection New TB infection in people with HIV can progress to active disease very quickly. In the USA active TB disease in two-thirds of people with both infections is due to recent infection rather than reactivation of latent infection. People with HIV are at risk of being newly infected if they are exposed to TB germs because their weakened immune system makes them more vulnerable.

Recurring infection People with HIV who have been cured of TB may be more at risk of developing TB again. However it is not clear whether this is because of reinfection or relapse.

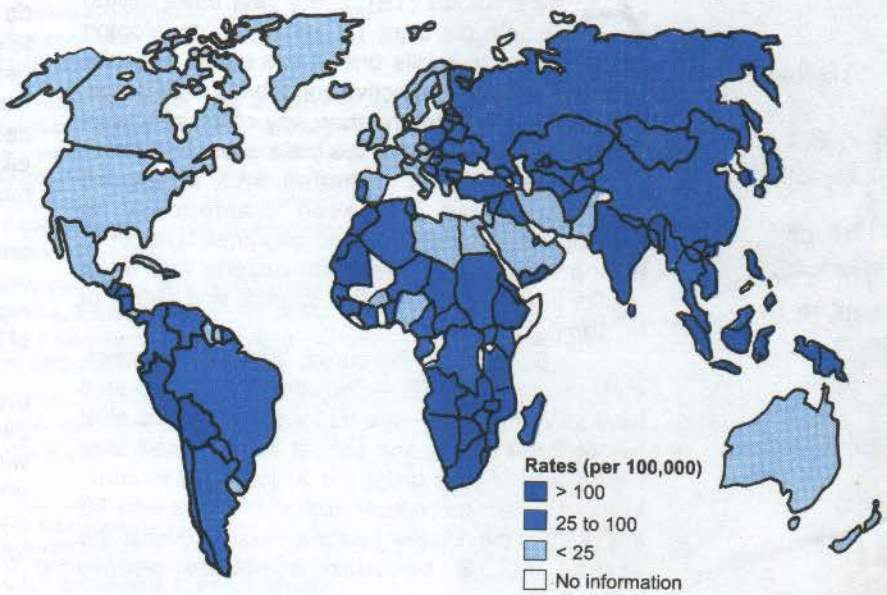
In the community there are more new cases of active TB because more people infected with TB develop active disease, and those newly infected become ill faster. This means that there are more people in the community who are infectious to others.

Larger numbers of people with active disease means that more people will die from TB unless they are treated. Tuberculosis is now one of the leading causes of death in people infected with HIV. In Abidjan, Côte d'Ivoire, for example, a third of people with AIDS are thought to have died from TB. But TB mortality is only higher in people with HIV if it is untreated. HIV-associated TB can be treated effectively if people are diagnosed early and given proper treatment.

The association of TB with HIV means that people suffer additional discrimination. If a young adult develops TB other people may assume that they also have HIV. Health workers need to respect the confidentiality of TB patients in the same way as that of people with HIV, while also ensuring that communities and families know how to prevent its spread. TB in people with HIV is no more infectious than TB in people who do not have HIV.

Community education is needed to increase awareness that TB is curable and, most important, that people are no longer infectious after the first few weeks of treatment. It is essential to tackle the stigma and fear associated with both TB and HIV.

*Number of people developing active TB 1990 - 1993**



Source: WHO, Weekly Epidemiological Record, 1995, 70, 73-80.

*Average notification rates of new and relapsed TB cases.

Principles of TB control

Proper detection and treatment

People can only spread TB to others when they have active TB disease. The key to TB care and prevention is to identify people who are infectious and to provide prompt and effective treatment to make them non- infectious and cure them.

Case finding should prioritise identifying people with smear positive active TB because they are the most important source of infection in the community. Passive case finding means diagnosing infectious smear positive people who come to health facilities with symptoms of TB.

Active case finding means trying to reach all those in a community who may have infectious TB disease. It is important to check children under five in a patient's family. However, in general active case finding is more expensive than passive case finding and studies have shown that fewer people may complete treatment.

WHO/Unicef

BCG vaccination protects children against TB disease in childhood.

Treatment and supervision

Anti-tuberculosis drug treatment is 95 per cent effective only when it is used correctly, so it is most important that TB patients complete their treatment. The treatment is based on a combination of drugs taken for at least six months, in two phases: an initial phase and a continuation phase. The combination of drugs varies as does the length of treatment.

People may find it difficult to take anti-tuberculosis drugs for a long period of time. But they can be helped by a well supervised programme and use of DOT (directly observed therapy) which means watching the person take their drugs. It is especially important that patients take their treatment during the initial phase to make them non-infectious.

BCG vaccination

BCG vaccine protects children against the most severe and life-threatening forms of TB disease in childhood, such as tuberculous meningitis. BCG does not reduce the risk of being infected with TB, and its impact on preventing pulmonary disease is limited. So BCG has a very restricted role in TB control because it does not prevent transmission of infection in the community.

BCG vaccination should be given to young children as early in life as possible, preferably immediately after birth. The only exception is if the mother is sputum smear positive when the baby is born. In this situation the infant should be given preventive therapy for six months. At six months a tuberculin test should be done. If it is negative BCG vaccination should be given.

Giving BCG vaccine to HIV-positive infants may increase complications or disseminated BCG disease (illness caused by the vaccine itself) in infants with severe immunodeficiency. However, the benefits of BCG vaccination outweigh the possible risks to HIV positive infants. Therefore BCG vaccine should be given to all infants, including those who may be HIV positive, and only withheld from infants with symptomatic HIV disease.

Women and TB

TB is often more likely to be detected and treated in men than in women. Women and men may be equally affected but often fewer women seek treatment for reasons including:

- lack of time because of work and family demands
- lack of money and transport
- the need to get permission or be accompanied by a male member of the family to a health centre
- stigma (some forms of TB can cause infertility)
- poor education which limits access to information about symptoms and treatment of active disease.
- lack of female health workers in cultures where female modesty is important

TB programmes need to be more responsive to the needs of women if they are to successfully increase case finding and treatment.

Source: Smith I. and Hudelson P. personal communication.

Preventive chemotherapy

Preventive therapy (or chemoprophylaxis) means giving anti-tuberculosis drugs to an individual with TB infection (or at very high risk of being infected) to prevent progression to active disease. In developing countries preventive therapy is only usually recommended for young infants whose mothers have active pulmonary TB, and children under five who are living with a person with infectious TB.

Chemoprophylaxis is also beneficial for individuals with HIV and TB infections, to preventing them from developing active TB disease. However, there are still many unanswered questions, and providing preventive therapy is not a feasible option for most national TB programmes.

Detection and diagnosis

Health workers should suspect TB if patients present with the following symptoms and history:

Adults
- cough for more than three weeks
- blood in the sputum
- chest pain for more than one month
- increasing weakness and loss of weight
- had TB in the past or previously treated for cough

Children
- close contact with a smear positive case
- positive tuberculin test
- wasting — decrease in weight with no obvious reason
- two or more episodes of fever with no obvious cause such as malaria

TB treatment should not be started on the basis of clinical symptoms alone (unless non-pulmonary disease is suspected when immediate referral and treatment are very important).

The main diagnostic tools are:
- sputum smear microscopy
- culture of bacteria
- tuberculin skin testing
- chest radiography (x-ray)

Sputum smear microscopy

Sputum smear microscopy is the most useful diagnostic tool in low income countries. Sputum examination is cheaper, easier and more reliable than taking x-rays, more reliable than tuberculin testing, and cheaper and easier than culturing. It is possible to detect most smear positive cases of pulmonary TB using sputum smear microscopic examination.

The method of collection of the sputum is important. It should be produced away from other people, placed in a tightly covered labelled container and delivered to the laboratory as soon as possible. If TB is suspected, ideally three sputum specimens should be collected within 24 hours: during the first consultation; by the person at home the next morning; and at the second consultation.
- Two positive sputum smears are enough to confirm the diagnosis of TB.
- If the first smear is positive and the second is negative (or vice versa), a third smear needs to be examined.
- If the first smear is positive and the person does not return for the second consultation they need to be followed up and encouraged to return. Without treatment they will infect others and their own condition will get worse.
- Health workers in areas without smear facilities need to look for clinical symptoms and history suggesting TB and refer the person to a health facility for screening.
- One negative smear result is not enough to exclude a diagnosis of TB.

Smear microscopy requires well-trained laboratory workers and well-maintained equipment. Poorly trained staff or inadequate equipment can lead to over-diagnosis of smear negative and under-diagnosis of smear positive cases. Sputum smear microscopy is also used to check cure, which is based on smear conversion from positive to negative.

Culturing

A specimen of sputum is sent to a specialised laboratory where TB bacilli, if they are present, can be 'grown' or cultured. Culturing is more sensitive than sputum smear microscopy but in many countries facilities and personnel are not available. It is also expensive and the results can take several weeks to come back. This delays confirmation of the diagnosis and starting treatment. Culturing is therefore often inappropriate as a diagnostic tool but is used to test TB bacilli for drug resistance and sensitivity where a patient is not responding to treatment. Culturing is also used for sputum smear

Definitions

Sputum smear examination laboratory technique to screen sputum for TB, where acid fast bacilli (AFB) are stained red by the Ziehl Neelsen method, and then identified and counted using microscopy

Smear positive TB at least two initial sputum smears positive for AFB or one AFB positive smear and one positive culture

Smear negative TB at least three negative smears, but TB suggestive symptoms and x-ray abnormalities or positive culture

Adherence person takes appropriate drug regimen for required time (also known as compliance)

New case a patient with sputum positive pulmonary TB who has never had treatment for TB or has taken anti-TB drugs for less than 4 weeks

Relapse a patient who returns smear positive having previously been treated for TB and declared cured after the completion of their treatment

Failure case a patient who was initially smear positive who began treatment and who remained or became again smear positive at five months or later during the course of treatment

Return after default a patient who returns, sputum smear positive, after having left treatment for at least two months

Transfer in a patient recorded in another administrative area register and transferred into another area to continue treatment (treatment results should be reported to the district where the patient was initially registered)

Transfer out a patient who has been transferred to another area register

Cured initially smear positive patient who completed treatment and had negative smear result on at least two occasions (one at treatment completion)

Treatment completed initially smear negative patient who received full course of treatment, or smear positive who completed treatment, with negative smear at end of initial phase, but no or only one negative smear during continuation, and none at treatment end.

negative cases where active TB is suspected.

Tuberculin skin testing

Tuberculin skin testing, which measures the body's response to TB, is also less useful in clinical diagnosis, except in children. An individual can produce a positive tuberculin test result if they are infected with TB or have been vaccinated with BCG. The tuberculin test cannot reliably differentiate between TB infection and TB disease. The test may also give a 'false negative' result if someone is infected with TB and HIV (see below).

Chest radiography

Chest radiography or x-ray is expensive and usually available only in hospitals. It is not the most reliable way of diagnosing TB, although it can be a useful supportive tool to help medical officers to diagnose smear negative TB. Chest abnormalities which show up on x-ray may be due to other conditions or previous TB disease. Relying on x-ray results can lead to over-diagnosis of TB and unnecessary drug treatment. But chest radiography may not detect the early stages of TB disease, and the signs of pulmonary TB (such as cavitations) usually seen on x-ray are less common in people with HIV.

Detection and diagnosis of TB in people with HIV

In most people in the early stages of HIV infection, symptoms of TB disease are the same as in people without HIV infection.

In areas where many people have HIV infection, TB programmes should continue to focus on identifying infectious sputum smear positive cases through microscopy. However, diagnosis of TB in individual patients using the standard diagnostic tools can be more difficult if they have advanced HIV infection.

- HIV positive people with pulmonary TB may have a higher frequency of negative sputum smears. Confirming the diagnosis may require sputum culture.
- The tuberculin skin test often fails to work in people who are HIV positive because it relies on measuring the response of a person's immune system. If the immune system has been damaged by HIV, it may not respond even though the person is infected with TB. HIV positive people with TB therefore have a higher frequency of false negative tuberculin skin test results.
- Chest radiography may be less useful in people with HIV because they have less cavitation. Cavities (spaces in the lungs) usually develop because the immune response to the TB bacilli leads to some destruction of lung tissue. In people with HIV, who do not have a fully functioning immune system, there is less tissue destruction and hence less lung cavitation.
- Cases of extra-pulmonary TB seem to be more common in people who are co-infected.

The health worker may suspect HIV infection because TB is difficult to diagnose, and the person is sick with other HIV-related infections. Offer confidential counselling and testing if available and appropriate. However, it is not necessary to know the person's HIV status.

WHO Photo by Zafar

Sputum smear microscopy is the best way to find out if a person has smear positive TB and is infectious to others.

For people thought, or known to have, HIV with TB symptoms:

- Screen for TB using sputum smear microscopy.
- If the result is positive start treatment.
- If the smear result is negative but it is suspected that the patient has TB, sputum culture should be carried where feasible to confirm the diagnosis.
- Give TB treatment to those with positive culture results.

Alternatively, where culture cannot be done, treatment can be given to those judged by a doctor to have active TB on the basis of x-ray and clinical symptoms.

Many HIV-infected smear negative patients thought to have TB in fact have other diseases. It is important to exclude the possibility of other infections before starting TB treatment. Usually this is done by treating first with a regular antibiotic for two weeks, and repeating the smear tests at the end of the two weeks if the person still has symptoms. If smear positive, start anti-TB treatment, but refer if still smear negative.

Treatment for TB

The principles of treatment are:

- an appropriate combination of drugs to prevent development of resistance;
- prescribed in the right dosage;
- taken regularly by the patient under supervision;
- for a sufficient period of time.

Drugs The most commonly used first line anti-tuberculosis drugs are: isoniazid (H), rifampicin (R), ethambutol (E), pyrazinamide (Z), streptomycin (S), and thiacetazone (T). Some of these drugs are available in combined preparations, for example isoniazid with rifampicin (RH) and isoniazid with ethambutol (EH). Treatment regimens which contain both isoniazid and rifampicin are the most effective. Because rifampicin is such a useful anti-TB drug, its use in treating diseases other than TB should be carefully limited. It is important to supervise treatment regimens containing rifampicin.

Pregnant women and young infants

- Pregnant or breastfeeding women who have TB should be treated with short course chemotherapy, regardless of HIV status.
- Rifampicin, isoniazid, pyrazinamide, ethambutol are safe for use in pregnant women.
- Streptomycin should not be given to pregnant women as it may cause deafness in the baby.
- If the mother has smear negative pulmonary TB at the time of birth the infant should be vaccinated as normal with BCG (unless she or he has HIV-related illness).
- If the mother is sputum smear positive at the time of birth and the infant is well, he or she should be given preventive therapy (isoniazid 5mg/kg in a single daily dose for 6 months) but not BCG. Give a tuberculin test to the infant after the six months preventive therapy. If the result is negative vaccinate with BCG.
- If the infant is unwell with TB symptoms give full anti-tuberculosis treatment.

Length of treatment Until recently the standard treatment regimen was 12-18 months. However, people are not likely to complete such a long course of treatment, which means they are not cured and continue to infect others in the community. Regimens can be shortened to 6-8 months if they include rifampicin. These regimens are called Short Course Chemotherapy (SCC).

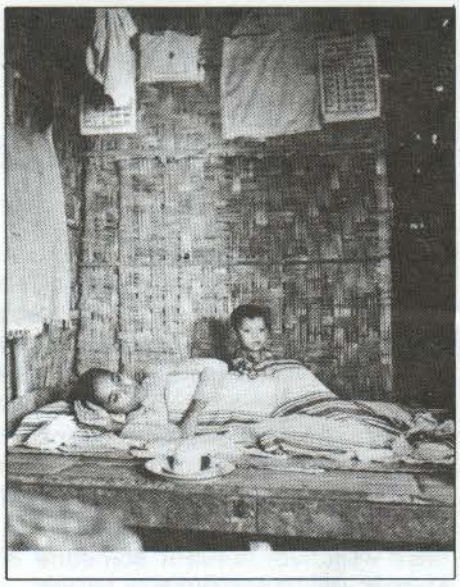
Since the late 1980s WHO has encouraged national TB programmes to introduce SCC regimens which include rifampicin. Because of financial constraints many developing countries are still using the old standard 12 month course. However, the drugs for the short treatment course are only a little more expensive. Successful completion of treatment is also higher and better cure rates are achieved. This means that SCC regimens are a better use of resources. Whatever regimen is used, making sure that the person takes the full course is essential.

Treatment of people with smear positive TB should always include:

an ***initial intensive phase*** - in this phase a combination of four drugs is given daily, to eliminate as many TB bacilli as possible and prevent the development of drug resistance. The initial phase of therapy should be given for a minimum of two months and continues until the patient becomes smear negative. Most people will have become smear negative after two months of treatment.

a ***continuation phase*** - in this phase fewer drugs are given but the treatment needs to be continued for long enough (depending on the SCC regimen the continuation phase can be four or six months) to ensure that the patient is permanently cured and does not relapse after completion of treatment.

Some TB programmes are limiting the use of streptomycin because it has to be given by injection. This is more expensive and risks spreading HIV where it is difficult to guarantee proper sterilisation of needles and syringes. Thiacetazone is no longer recommended in areas where HIV infection is common because of side effects.



UN/WHO

A young mother is treated for TB in her own home.

Intermittent therapy means taking anti-tuberculosis drugs three times a week instead of daily. There is no difference between intermittent and daily regimens in terms of the length of time before sputum conversion from positive to negative, or the final outcome.

How to assess cure?

To be sure that TB is cured, a patient who is initially smear positive must produce a smear negative result after treatment. The change from sputum smear positive to sputum smear negative is called smear conversion. Patients need to be followed up to ensure that information on sputum conversion and outcome of treatment is obtained.

The patient's sputum should be examined after the initial two months of treatment. If it is smear negative, they can start the continuation phase. The sputum should be examined again at the end of the fourth or fifth month to identify people who have failed treatment. During the last month of treatment a final smear is taken to identify cure, or treatment failure.

Patients cannot be classified as cured if there is no sputum conversion from positive to negative. This applies to

initially sputum negative patients, or to sputum smear positive cases who completed treatment, with negative smears at the end of the initial phase, but with no or only one negative sputum examination in the continuation phase and none at the end of treatment. Sputum conversion is the only way to be sure that a person is cured, even if they complete treatment and have no clinical symptoms. If it is impossible to examine the sputum, then the patient is classified as 'treatment completed'.

Failure to respond

People fail to respond to treatment either because:

- they are not taking their drugs OR
- they have drug resistant TB.

Not taking the drugs is the most common reason for treatment failure. If a person continues to be sick, with persistent cough, fails to gain weight and has persistent positive sputum after treatment for some time, use the WHO recommended retreatment regimen for both HIV positive and HIV negative patients who:

- remain sputum positive after five months of treatment (failure case)
- interrupt treatment for more than 2 months and return smear positive (return after default case)
- return smear positive after completing treatment and being declared cured (relapse case).

The therapy for retreatment should be fully supervised for at least three months, and longer if the patient is still sputum smear positive after three months. If the patient still fails to respond they may have resistant TB bacilli and need to be referred.

REMEMBER:

- if a patient fails to respond to the treatment regimen, refer for assessment
- treatment should be supervised as poor compliance is even more likely with more toxic and longer regimens
- good record keeping is essential to distinguish between people with new active TB, or who have failed treatment, because the treatment regimens are different.

Source: Treatment of TB. Guidelines for National Programmes. WHO.

TB SCC treatment for new cases, adults >50kg

INITIAL PHASE

2 months DOT

isoniazid and rifampicin H: 150mg, R: 300mg 2 tablets DAILY	AND	pyrazinamide Z: 500mg 4 tablets DAILY	AND	ethambutol E: 400mg 3 tablets DAILY	OR	streptomycin powder 1 g base in vial Injection DAILY

CONTINUATION PHASE

4 months DOT			OR	**not DOT** 6 months	OR	**6 months DOT** (not if HIV + risk)
isoniazid and rifampicin H: 100mg, R: 150mg 4 tablets DAILY 3 x WEEKLY	AND	isoniazid H: 300mg 1 tablet, 3 x WEEKLY		isoniazid and ethambutol H: 150mg E: 400mg 2 tablets DAILY		isoniazid and thiacetazone H: 300mg T: 150mg 1 tablet DAILY

TB re-treatment for adults >50kg

INITIAL PHASE

3 months DOT					**First 2 months only**	
isoniazid and rifampicin H: 150mg, R: 300mg 2 tablets DAILY	AND	pyrazinamide Z: 500mg 4 tablets DAILY	AND	ethambutol E: 400mg 3 tablets DAILY	AND	streptomycin powder 1 g base in vial Injection DAILY 750mg

CONTINUATION PHASE

5 months DOT

isoniazid and rifampicin H: 100mg, R: 150mg 4 tablets DAILY 3 x WEEKLY	AND	isoniazid H: 300mg 1 tablet, 3 x WEEKLY	AND	ethambutol E:400mg 4 tablets 3 x WEEKLY

Side effects of drug treatment

Serious side effects to TB drugs are rare. Minor side effects do not mean that treatment should be stopped, but people need reassurance and to be warned about possible side effects in advance. Side effects which are associated with certain drugs include:

- **Skin rashes and itching** - reaction to thiacetazone and other drugs.
- **Shock and fever** - can be caused by rifampicin, pyrazinamide and/or streptomycin.
- **Problems with sight** - can be caused by ethambutol. Patients should be warned to report any problems with their vision. Ethambutol is not usually given to children who are too young to be able to report visual problems.
- **Hepatitis** - liver disease where the patient develops jaundice. Commonly due to isoniazid but may also be caused by rifampicin and pyrazinamide.
- **Dizziness** - caused by streptomycin, most frequently in older individuals or children. Streptomycin should never be given to pregnant women because it can cause deafness in the unborn child.
- **Reaction in the joints** such as pain, swelling, heat - caused by pyrazinamide.
- **Flu-like illness and/or abdominal pain** - caused by rifampicin.
- **Red/orange colour of body fluids** such as tears or urine - caused by rifampicin.

If patients develop any of the following serious side effects stop the treatment and refer them to a doctor immediately:

- yellow jaundice
- serious skin conditions (more common in people with HIV)
- problems with urinating and possible renal failure
- shock

Community and home based care strategies for TB and AIDS

AIDS and TB in Asia

As AIDS cases rapidly increase in Asia, many countries turn towards community- and home-based care for people with HIV and AIDS. The AIDS pandemic also has considerable implications for existing TB control programmes in Asia, which has the highest number of TB cases in the world. For TB control, Direct Observed Treatment with short course Chemotherapy (DOTS) is a widely advocated and accepted strategy. AIDS and TB care strategies are closely linked, with people in the community and family providing care and support. The linkage is even stronger, as the two diseases are often found together in the same patient.

There are also fundamental differences between HIV/AIDS and TB control strategies. Especially when it comes to prevention, AIDS control focusses mainly on behaviour change, whereas TB prevention is best achieved through treatment and cure. As a result of this, TB programmes are more usually combined with leprosy programmes, and AIDS integrated with STD or family planning. At the level of the health services, it is rare to find combined TB/AIDS programmes.

TB and HIV are often integrated at the patient level, as far as needs for care and support are concerned. To what extent then do treatment, care and support strategies for the two conditions relate?

Integrated care and support for TB and AIDS

Two questions are important if we explore the possibilities of integrating TB and AIDS care. For health service planners, the following questions are relevant:

1. Can planning for home-and community-based care for people with HIV/AIDS (PWA) learn anything from care for patients with TB, and vice versa?

For health workers and care-givers, the practical implications of service delivery will be more relevant:

2. How can we integrate HIV care into the DOTS strategy for TB patients, and conversely, how can we provide proper treatment for TB through existing AIDS care systems?

Planning for integrated TB and AIDS care: learning from each other

1. DOTS: TB care and support:

In the past, most TB patients used to be hospitalised, but recognition that TB could be treated at home without putting the family and community at risk led to ambulatory treatment. Promotion of 'supervised treatment' reintroduced hospitalisation, but the heavy burden on the health care systems, forced a reversion to community based treatment.

DOTS, a community-based TB treatment and care strategy, combines the benefits of supervised treatment, and the benefits of community-based care and support. It ensures high cure rates in patients with tuberculosis, through its three components: appropriate medical treatment, supervision and motivation by a non-health worker, and monitoring of disease status by the health services.

Short Course Chemotherapy is a combination of anti-tuberculosis drugs, for a sufficient period of time.

Supervision and motivation by a person who is accessible to the patient and accountable to the health service, encourages and educates the patient, and observes them taking their medicines correctly.

Monitoring of the patient, to determine the outcome of their treatment.

2. Home and community based care and support for people with HIV/AIDS:

In many resource-poor countries, the health services have been overburdened with the care for people with HIV/AIDS. The realization that long term hospitalization is rarely needed for adequate treatment of opportunitic infections, and that there are rich traditions of community support for chronic patients, led to the development of home- and community-based care and support strategies. In Asia, initiatives often come from community-based and AIDS service organisations, to be taken on later by government health services.

Care and support programmes for people with HIV/AIDS advocate a 'continuum of care', from national hospitals through health posts, communities, and families to individuals. The components are not only medical and nursing care, but also social, emotional, spiritual, and material support. AIDS requires a long term commitment, till death. HIV prevention education for patients and their carers is necessary, and closely linked to care.

3. Combining the strengths:

The similarity between the two approaches is the idea of shared care, shared responsibilities. Through linking person, both aim to support the patient in maintaining independence and responsibility, while avoiding to make him/her solely responsible for provision of care.

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Both acknowledge the important roles of the care giver, as advocate on behalf of the patient, and health educator to community. The challenge for both programmes is to avoid overburdening women and girls, the traditional care givers.

However, the approaches differ in their perspective. Underlying DOTS is a medical approach, the emphasis is on appropriate treatment and cure. DOTS is unique in that it explores ways to strengthen patient support and motivation in order to achieve cure. On the other hand, care for PWAs is a more holistic approach, with an emphasis on care and support, by lack of a cure for AIDS. The strength is its perspective of the patient, and the challenge is to strengthen its medical care, and cure, component at community level, not least for TB as an opportunistic infection. Interestingly, both approaches meet at the level of the family and community, and acknowledge the need for and strengths of traditional, holistic health care.

Home based care of PWAs is an NGO dominated field, whereas TB care is mostly a government health service initiative. Health services are often better at providing medical services, NGOs often better at providing care, enabling and empowering. The 'continuum of care' concept, acknowledges the necessity to link public and private health services. In many PHC programmes, community health workers play this pivotal role, sometimes leading to heavy demands on their time. The challenge for TB programmes is to involve community-based groups as supervisors and educators, and the challenge for HIV/AIDS programmes is to involve local health personnel.

Implementation of integrated care and support

It is obvious that it is necessary, and possible, to integrate home and community-based care and support for people with TB and/or AIDS. However, it requires a concerted effort from policy makers at national level, health workers, and caregivers. The following recommendations could provide a supportive environment for people with TB, HIV, or both, and could lead to appropriate, humane, and effective care.

Recommendations for National TB programmes:

- Coordinate with National AIDS Progamme
- Training TB workers/health workers in AIDS, recognizing opportunistic infections, counselling and confidentiality, universal precautions, etc.
- Develop national policy on testing with emphasis on confidentiality
- Develop national policy choice of treatment, and Isoniazid preventive treatment

Recommendations for health workers:

- Treat every TB patients as if he/she is HIV+: universal precautions
- Provide diagnosis and treatment services for TB as close to home as possible
- Create linkages and referral systems with local AIDS NGOs
- Counsel known HIV+ patients, or refer to AIDS NGOs
- Educate all TB patients and caregivers on HIV/AIDS prevention
- Strengthen follow up for re-infections, relapses
- Select caregivers carefully, support them, be aware of burn out, impact on wives/daughters, refer to AIDS support NGOs
- Providing treatment for TB through community-based AIDS care systems

Recommendations for National AIDS programmes:

- Coordinate with National TB Programme on training needs for health workers and policies on testing and counselling
- Strengthen TB control programs

Recommendations for local health worker and AIDS support workers:

- Teach PWAs/caregivers **before they get TB** the importance of full treatment
- Teach PWAs/caregivers to recognize TB symptoms early, and seek treatment
- Diagnose TB early, and treat TB appropriately, or build link with TB treatment centres
- Provide support not only to the patient, but also to the caregivers, prevent burn out

Recommendations for caregivers:

- Know the symptoms of TB, encourage early diagnosis and treatment
- Supervise medication in case of TB

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by Ian Smith, Paul Janssen and Sally Smith
Kathmandu, Nepal

DOTS, TB and HIV

DOTS is the latest of health-related acronyms to hit the media. Standing for Direct Observed Therapy Short-term, DOTS is touted as ***the*** way to controlling, if not eradicating, the age-old problem of tuberculosis through closely supervised treatment for six to eight months. Considering that the re-surgence of tuberculosis has come partly as a result of a newer public health problem, HIV/AIDS, it is important to look at how DOTS will impact on health care strategies in general.

DOTS and Compliance

The whole rationale of DOTS is based on patient non-compliance with the prescribed treatment. DOTS therefore calls for supervised treatment. But just what is this problem of compliance? DOTS was first developed in the United States, in settings of "stubborn" patients such as drug dependents who would not comply with the doctors.

In many situations in developing countries, the problem is not so much of patient compliance than access to TB drugs. In the Philippines, for example, the prescribed course for six months costs P6000 (US$230), equivalent to about two months household income in many impoverished rural villages.

If the drugs are available for free or at subsidized costs from the government or non-government charities, they are still often limited to town centers. In fact, promoting DOTS may reinforce the idea that the medicines should be dispensed only in areas where qualified health professionals are available to supervise treatment. This again places severe limitations on access: the people most vulnerable to tuberculosis also being the people who cannot access health centers because of physical as well as financial reasons.

Access, one forgets, is often socially determined. Thus, even in urban poor areas, government health centers may be physically accessible yet considered socially distant because of impersonal staff, or because of the stigma attached to TB. DOTS in fact has the potential of further stigmatizing the disease because of its having to be treated by health professionals in institutional settings.

Even if medical supervision were available and accessible, we deal now with a wide range of factors that affect a patient's use of TB medications. There are many possible side effects, even adverse reactions, that can result from the medicines. Paradoxically, the positive effects of TB medication may also lead to patient drop-out from treatment. Once the patient feels better — and this can occur even within the first two weeks after treatment begins — he or she might stop taking the medicine.

Of course, one could argue that DOTS has a role here in explaining both positive and negative effects of the medicines. This presumes that health personnel will provide support in explaining the effects and assuring patients and their families when adverse reactions occur. DOTS probably will work if implemented by highly motivated community-based health personnel. Unfortunately, in many situations — both in developing and developed countries — such personnel are hard to come by, given the already loaded public health systems.

Learning from TB

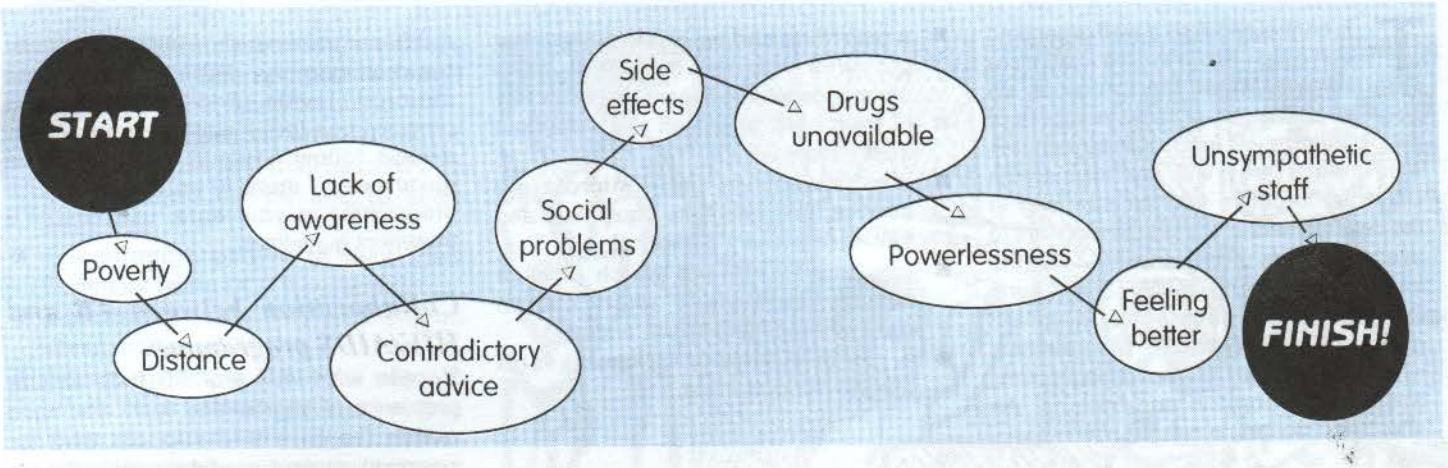
DOTS actually represents a revival of old public health models, what some have called the medical police model with an emphasis on surveillance, patient tracking and institutional settings. It is ironic that DOTS is being promoted at a time when the HIV epidemic has resulted in alternative models: highly decentralized and community-based. No doubt, DOTS could adopt many aspects of community-based health care. AKAP, a Filipino non-government organisation doing primary health care, demonstrated this more than a decade ago in an urban poor resettlement area, challenging the dominant model at that time of sanitarium care. Community health workers fanned out for both preventive (health education; immunization) and curative services, including what one could call DOTS today. But such programmes received little support. One would have to be extremely cautious in predicting the prognosis of DOTS today, the way it is promoted and implemented through the aegis of centralised government bureaucracies.

Perhaps even more disturbing is the way DOTS focuses on a curative drug-centred model for eradicating TB. One forgets that TB was eradicated in much of the developed world long before TB medicines were discovered, or that TB remains a major problem in many poor countries decades after drugs and vaccines were discovered, or that the resurgence of TB is happening with socially marginalized and deprived communities — ethnic minority groups; refugees; urban poor — both in developed and developing countries.

Drugs do have a place in TB eradication, and the problem of drug resistance — because of improper use of TB medicines — is only too real. Unfortunately, DOTS places too much emphasis on patient non-compliance, failing to recognise that even problems of drug resistance came out of the medical establishment's indiscriminate prescribing and dispensing. (Or, in countries like the Philippines, from politicians' dispensing of a week's supply of free anti-TB drugs.) There is the danger that DOTS will reinforce false expectations about what pharmaceuticals can do. If anything, TB has taught us that medicines and vaccines alone will not bring automatic solutions. Prevention through education will always remain vital. It is a lesson one must keep in mind in relation to TB's modern-day counterpart: HIV/AIDS.

M.L. Tan
HAIN

TB treatment game



This game aims to help health workers explore why people might stop taking their TB drugs. It can be played by individuals or small groups, playing against each other.

Players have to try to cross the TB treatment river, using the stepping stones. If they reach the other side they have completed their treatment and are cured. However, there are many reasons why they might slip off the stones, and fail to take their drugs.

1. Ask participants to describe a health worker's typical reaction to someone who stops treatment — often anger and frustration. Then ask them to think of all the reasons why people with TB might not complete treatment, and to pick out the 10 most important ones.

2. Hand out copies of the game with the stepping stones left blank, and ask participants to write in the 10 reasons.

3. Draw a circle about 50cm in diameter on the floor, and divide into 6 equal wedges. Write the numbers 1 to 6 in the wedges. Draw a boundary line 2-3m away from the centre of the circle.

4. The player stands behind the boundary line, and throws a coin into the circle. If the coin lands inside a wedge, then the player moves across that number of stepping stones. If the coin lands outside the circle, or on a line, then the player has fallen off the stone, and is out. If the first throw is out, allow the person to throw again until they land in a wedge and reach a stone. Each person continues throwing until they reach the other side or fall off a stone.

5. Discuss the game with participants:

- How many people fell off? Is this figure similar to the proportion who don't complete their treatment?
- Which stones did people fall off most — are these common reasons in real life?
- Of the reasons given, for which can the person be blamed? And the health worker? Is it fair for health workers to be angry with people who default?
- How can health workers encourage people to complete their treatment?

Usually only one or two reasons are the person's fault, and the rest are the health service's responsibility. Finish by asking whether in fact it is the patient who should be angry with the health worker, rather than the other way around!

Another useful exercise is to ask the health workers, in small groups, to draw a TB patient. Pin the pictures up and use them as a discussion starting point. Ask questions such as: What signs and symptoms do the pictures show? What kinds of people have they drawn? Health workers often draw a picture of an adult man. Ask: Does this mean that health workers are less likely to consider TB in women?

Source: Smith I, Tuberculosis control learning games, Tropical Doctor, July 1993 and personal communication

Ways to work together: HIV and

TB control requires a well organised national programme. A poor programme is worse than none at all, because of the risk of large numbers of people being given inadequate treatment. This means they will continue to be infectious to others and this can lead to the development of TB strains resistant to available drugs. WHO and IUATLD (the International Union Against TB and Lung Disease) have developed standard guidelines for national TB programmes, which are responsible for planning, policy, budgets, supervision and training. An effective programme needs:

- a **recording and reporting** system that provides information about case categories and treatment results
- to **train staff** to screen, diagnose and treat patients
- a reliable sputum smear **microscopy service**, with adequate equipment and trained laboratory personnel
- **treatment services** which provide directly supervised short course chemotherapy and health education
- a **reliable supply of drugs and diagnostic materials.**

TB programme activities

(showing possible links with HIV services)

Central TB unit, MOH
- plan, monitor and supervise national activities
- liaise with **HIV/AIDS/STD** and essential drugs programmes
- co-ordinate training, drugs and diagnostic supplies

Regional TB co-ordinators
- liaise with central TB unit
- ensure effective co-ordination of above activities in region, and liaise with HIV services
- regular technical supervision of district TB officers
- review case finding and treatment reports

District TB officer (with DMO)
- supervise and visit primary facilities
- collect data for and maintain district TB register, with quarterly reports on new cases, relapses and treatment results
- support case finding activities
- supervise effective microscopy service and records
- arrange training and supervisory activities, including HIV-related issues
- ensure referral possible if necessary
- maintain drugs and equipment
- **make appropriate links with district AIDS committee and AIDS team at hospital**
- **encourage community education and links with AIDS NGOs providing home care and education**

Primary health facilities
- identify people with possible TB symptoms and trace contacts
- take sputum samples and liaise with laboratory
- provide efficient referral and treatment services: appropriate regimens and sputum testing, **counselling, health education, local organisation of DOT (clinic visits, community workers, AIDS home care services)**
- keep TB treatment cards and records up to date
- follow up defaulting patients and discharge patients who are cured or have completed treatment
- **carry out community education (with HIV services if appropriate)**
- report regularly to district level
- **ensure staff understand HIV and TB links, and are aware of needs for counselling etc.**

A TB programme should facilitate links between primary, district, regional and national levels and with HIV/STD programmes too. Health workers should always follow national TB programme guidelines. If there is no functioning TB programme in your area, use WHO TB treatment guidelines.

Collaboration between TB and HIV/AIDS programmes

People with HIV and TB face similar problems of stigma and fear, and have needs for care and support, and for counselling and confidentiality. Closer collaboration between TB control and AIDS programmes in these areas could be useful. For example, more integrated approaches to community education could help to change attitudes to both infections and reduce stigma. Collaboration in home care and follow up of patients with TB and with HIV/AIDS could help to increase adherence to TB treatment and identification of people with active TB.

- Nurses in Kenya, trained in HIV counselling and who plan care for people with AIDS after discharge from hospital, are extending their services to patients on TB wards.
- In Ghana a peer support group for people with HIV, working with health staff, discusses TB prevention, early TB recognition, and treatment adherence during home visits
- Hospital community outreach teams in South Africa visit people with HIV and TB at home. Many patients have both infections and the integrated approach helps to share limited resources such as transport, to reduce stigma and to increase community acceptance.

What can NGOs do?

NGOs should make sure that their activities complement the national TB programme and discuss what role they can play to support the national programme with the district TB officer. Local AIDS organisations are playing a vital role in community education and care including:

TB programmes

- Ensuring that community members recognise TB symptoms, and understand that it can be cured
- Encouraging people with symptoms including those who may have HIV to be screened for TB and to seek treatment
- Encouraging people to take their treatment using DOTS systems
- Countering misbeliefs and stigma about AIDS and TB
- Educating people about the ways in which TB is spread and encouraging them to cover the mouth when coughing and to spit into a container and dispose of sputum carefully
- Providing home care and support to people with TB and HIV.

What can health workers do?

Health workers need to be friendly and aware of the person's needs for confidentiality, and to:

- Ask about symptoms — if a person has had a cough for more than three weeks and chest pain, get a sputum test done
- Make sure that the person understands that the full course of treatment is needed even if the symptoms soon go, and discuss the person's fears and worries about TB (and HIV)
- Be aware of the possibility that the person may have HIV, and offer HIV counselling and testing if it is appropriate and available
- Help them to take their full course of treatment
- Make sure they understand that they are no longer infectious after 2-3 weeks
- Examine family and household contacts for TB, especially if they are ill
- Keep proper records and visit the person at home if they don't come for their appointment or drugs
- Ensure that supplies of anti-TB drugs are available and do not run out
- Refer difficult cases to a centre with a physician or TB specialist
- Check HIV patients for TB and make sure that people with both infections do not receive thiacetazone.

AKAP

Community-based education programmes on TB could be broadened to include HIV/AIDS.

Keeping records

Records are needed for a TB programme to work effectively. The recording system should enable health workers and TB programme staff to plan, monitor and evaluate services and drug supplies and to:

- see how many cases are being detected
- ensure that all potentially infectious cases are being properly screened
- monitor patients' progress and adherence to treatment
- make sure all patients are fully treated
- assess the effectiveness of treatment
- distinguish new cases from those that have previously received treatment
- prevent the development of drug resistance
- identify problems and where more training or supervision is needed

For each person records need to be kept of:

- diagnostic examinations
- treatment including the initial phase of treatment, patient adherence and follow up
- follow up sputum smear results, smear conversion and treatment outcomes for those initially smear positive

A record system usually includes the following:

- patient TB card (kept by the person)
- TB treatment card (kept at the health facility)
- clinic TB register (kept at the health facility)
- TB laboratory register
- district TB register

Preventive therapy

TB chemoprophylaxis means treating people with symptomless TB infection to prevent the development of active disease. Preventive therapy has been shown to be beneficial for people with both TB and HIV infections who are at risk of rapid progression to active TB disease. Daily isoniazid (isoniazid preventive therapy or IPT) can reduce the incidence of active TB in HIV positive people. Before IPT can be considered, voluntary HIV counselling and testing facilities need to be available for people who may have HIV.

There are still many questions about IPT. It is not clear at what stage of HIV disease chemoprophylaxis should be given, or which drug regimens might be most effective. It is also not clear for how long people should continue to take preventive therapy and whether the benefits continue after completing the recommended period of therapy.

Who should get IPT?

IPT should only be given to HIV positive people who have TB infection but who do not have active TB. Those with active TB need full treatment. Giving only one drug to a person with active TB can help resistant strains of TB to develop.

Proper TB screening is essential to ensure that preventive therapy is not given to patients with active TB. But it is not always easy to confirm whether HIV positive individuals have active TB disease or TB infection (see page 5).

The WHO guidelines for tuberculosis preventive therapy in HIV positive individuals should be followed (see below). The guidelines emphasise that IPT should only be considered for HIV infected people with a positive tuberculin skin test who do not have active TB.

Limitations of IPT

Resources In most developing countries, voluntary counselling and testing for HIV, screening all HIV positive patients for TB infection, and providing drugs for preventive therapy are not possible. Although IPT can prolong healthy life in individuals with HIV and TB infections, resources should be prioritised for identifying and treating smear positive patients.

Side effects Hepatoxicity (the risk of hepatitis) is one of the most common side effects of IPT and can be fatal. The risk is higher in adults aged over 35 years. However in HIV positive people the benefits of IPT generally outweigh the risk of toxicity, except in people with chronic active hepatitis or possibly those with more advanced HIV disease.

Drug resistance Preventive therapy could potentially increase drug resistance if it is wrongly given to those who have active TB. The effects on the development of drug resistance of large scale preventive therapy with one drug are not known.

Adherence Without good support and supervision, there may be problems in ensuring people take preventive therapy for long periods of time, especially if they do not have symptoms of TB disease.

WHO recommendations

1. Isoniazid preventive therapy can be of value to individuals with both HIV and tuberculosis infection.
2. Education about TB and its link to HIV infection should be part of HIV pre- and post-test counselling.
3. People who are HIV positive:
   - should be screened for TB by clinical examination.
   - should receive a tuberculin skin test.
   - if the tuberculin test is positive they should receive a chest x-ray.
4. People with symptoms consistent with tuberculosis and/or an abnormal chest x-ray should have sputum collected for bacteriological examination culture.
5. People with a positive skin test in whom active TB has been excluded (by x-ray and culture) should be given isoniazid at the daily dose of 5mg/kg up to a maximum of 300 mg for 6-12 months.
6. Persons receiving preventive therapy should be monitored monthly for adherence, toxicity and the development of active TB.

Source: Preventive therapy for TB in HIV-infected persons, Lancet vol 345, 1995.

Drug resistance

Drug resistance means that certain strains or types of TB bacilli are not killed by the anti-tuberculosis drugs given during treatment. Some strains can be resistant to one or more drug. WHO defines a multi-drug resistant (MDR) strain as one that is at least resistant to isoniazid and rifampicin. A person infected with MDR TB will therefore not be cured by short course chemotherapy which relies on these two drugs.

Why does drug resistance develop?

Drug resistance is caused by inadequate TB treatment and poor TB control programmes. The most common reasons for the development of resistance are:

- incorrect prescription
- irregular supply of drugs
- lack of supervision and followup

There are two types of drug resistance:

Acquired resistance is where resistance develops as a result of inadequate treatment. Use of a single drug is the most important cause of acquired resistance. This is because some TB bacilli are naturally resistant to anti-TB drugs. If a single drug is used to treat a patient who is infected with a large number of TB bacilli only those which are sensitive to that drug are killed, allowing the resistant bacilli to multiply. This is the reason for using several drugs during the initial intensive phase of treatment, until the number of bacilli has been greatly reduced.

Primary resistance is when an individual is infected by someone who already has drug resistant TB bacilli. The newly infected person will have TB that is drug resistant from the outset. The number of people with primary resistance — who

have drug resistant TB but who have not been treated for TB before — is increasing.

Is MDR TB a major problem?

In all countries and especially those where the number of cases of TB is rising rapidly because of the association with HIV, the development of resistant strains of TB is a serious concern.

Between 50 and 100 million people worldwide are thought to be infected with strains of resistant TB. An accurate picture of drug resistance is not available because few countries have a reliable drug resistance surveillance system. Resistance varies, for example in Africa resistance to isoniazid is estimated at between 5 per cent and 10 per cent.

Resistance to rifampicin, one of the most effective TB drugs, is thought to be low in Africa because the drug has not been widely available. But there are signs that resistance to rifampicin is developing: for example, it has been reported in Thailand. Drug resistance is potentially a serious problem in countries where prescription of anti-TB drugs by private physicians is not well controlled.

WHO and IUATLD have developed guidelines to help countries detect strains resistant to the main TB drugs through national surveillance programmes. Better information will help countries to decide which is the most appropriate SCC drug regimen and the best strategies for retreatment.

What are the dangers of MDR TB?

The most serious danger is that MDR TB is much more difficult to treat, even where second line drugs are available. Treatment of MDR TB can take at least two years and the results are poor. Second line drugs cost 30-35 times as much as drugs used in SCC treatment of non-resistant TB. Patients with MDR TB may need to be hospitalised and isolated, which adds to the cost of treatment, to prevent transmission of primary resistant strains to others. In the USA it is estimated that treating one case of MDR TB costs ten times as much as treating a case of TB sensitive to the usual drugs. Careful precautions are necessary to prevent transmission, especially to health workers caring for MDR TB patients.

Checklist for IEC Activities on HIV/AIDS

(This checklist was developed by the Philippine National AIDS Council, and is based on the IEC Guidelines featured in *AIDS Action* issue 29.)

The Checklist is designed to help organisations evaluate their own materials and activities and to determine whether these conform with the principles stated in the IEC Guidelines.

The following IEC materials/activities may be evaluated using the IEC Checklist: print - newsletters, news reports, brochures, posters, leaflets, hand-outs, flyers, billboards, T-shirts, and others; electronic/broadcast - radio, TV, film and video; interpersonal communication - counseling, workshops, lectures, focus group discussions, etc.

The Checklist is composed of 32 questions, marked "R" or "O". "R" means that a material/activity is required to comply with that particular question. Failure to comply with even just one required item means that the material/activity is not in accordance with the PNAC IEC guidelines. Questions marked "O" mean optional compliance. Although a material/activity does not have to comply with "O" questions, compliance with these would contribute to the improvement of the material/activity.

Organisations producing materials or conducting IEC activities are to evaluate their own materials using the chcecklist. As with the IEC guidelines, the checklist is recommendatory in nature — meeting the standards set by the PNAC is not compulsory. However, compliance with the checklist would contribute to a more effective IEC material/activity.

DEVELOPMENT OF THE MATERIAL

R. 1. Was baseline research conducted to identify knowledge gaps and attitudes and behaviors which may increase risk of HIV infection?
R. 2. Was a pre-test conducted with a group similar to the intended audience before the material was finalized?
O. 3. Did a panel of experts review the material before it was finalized?
O. 4. For materials which are to be translated into other languages, was back translation carried out to ensure that the translation is true to the original version?

ACCURATE

R. 5. Is biomedical and technical information in the material/activity consistent with empirical evidence of the World Health Organisation, or the Department of Health, or other recognized scientific bodies?
O. 6. Are bibliographical references or technical experts cited to establish accuracy of information presented?

CLEAR (text, illustrations, the material as a whole)

Does the material/activity:

R. 7. Convey simple and easy-to-understand messages?
R. 8. Use concrete terms (not abstract terms)?
R. 9. Use familar terms instead of jargon?
0. 10. Explain in a chronological sequence (when applicable)?
O. 11. Emphasize important points?

APPROPRIATE

Is the material/activity appropriate to the target audience in terms of:

R. 12. text?
R. 13. illustration?
O. 14. format?

ACCEPTABLE

R. 15. Does the material/activity avoid words, illustrations of messages which are considered or distasteful by the target audience?

GENDER SENSITIVE

R. 16. Does the material/activity avoid portraying any gender as being responsible for the spread of HIV? (This can be conveyed either in the text or in the illustrations)?
R 17. Does the material/activity avoid portraying women (in text or in illustrations) as mere sex objects?

EVALUATING HIV/AIDS ACTIVITIES

(continued from page 15)

O. 18. Does the material/activity encourage empowerment of women to enable them to negotiate for safer sex practices?
O. 19. Does the material/activity promote positive attitudes toward the equality of men and women?

AFFIRMATIVE

R. 20. Does the material/activity avoid fear arousing messages?
R. 21. Does the material/activity avoid coercive messages?
O. 22. Does the material/activity specify desired behavior clearly?
O. 23. Does the material/activity emphasize efficacy of preventive behavior?

NON-MORALISTIC AND NON-CONDEMNATORY

R. 24. Does the material/activity avoid portraying any group (such as OCWs, homosexuals, injecting drug users, etc.) as being responsible for the spread of HIV/AIDS?
O. 25. Does the material/activity avoid condemning any population group for the behavior vis-a-vis HIV/AIDS?

NON-PORNOGRAPHIC

R. 26. Does the material/activity aim to educate and enlighten?
R. 27. Does the material/activity avoid prurient messages?

ON USE OF ILLUSTRATIONS AND PHOTOGRAPHS

R. 28. Use relevant illustrations / photographs?
R. 29. Convey a clear message through illustrations and/or photographs?
O. 30. Place illustration/photograph near relevant text?

DISTRIBUTION MECHANISM

R. 31. Does the material identify the audience for whom it was developed?
O. 32. Is there a "descriptive clause" in the cover of the material which gives an indication of its content?

RESOURCES

Clinical tuberculosis provides practical information on all aspects of TB control and clinical care. *Available for £3.00 in English, French, Spanish and Portuguese from from TALC, PO Box 49, St. Albans AL1 4AX, Herts, UK.*

Tuberculosis guide for low-income countries is a handbook providing information for staff involved in primary level prevention and care. *Single copies in English, French or Spanish free from IUATLD, 68 Boulevard Saint-Michel, 75006 Paris, France*

TB and HIV Quarterly: SidAlerte Supplement is a quarterly magazine in French and English covering good policy and practice in TB and HIV care and prevention. *For subscription details write to SidAlerte Internationale, 7 rue du Lac, 69003 Lyon, France.*

China Tuberculosis Control Collaboration, **"Results of Directly Observed Short-Course Chemotherapy in 112,842 Chinese patients with Smear-Positive Tuberculosis."** *The Lancet.* Feb. 10, 1996 (v. 347, pp 358-362).

Childhood TB is a new briefing paper from AHRTAG. *Available free to readers in developing countries.*

Preventing infections in health-care settings provides practical guidelines on reducing the risk of blood and air-borne infectoins. *Available free to readers in developing countries and for £5.00 elsewhere, from AHRTAG.*

Tuberculosis and AIDS : the situation in Asia by Garance Upham provides a summary of country reports presented in the 1993 TB and Respiratory Disease of the IUATLD, Eastern Region conference. *TB & HIV* Ja-Mr 1994 (10-11). *Free copies for developing countries may be obtained from* ***HAIN.***

Country reports on HIV/AIDS: Pakistan, Cambodia, Vietnam. *TB & HIV* Ja-Mr 1994 (12-17). Free copies for developing countries may be obtained from ***HAIN.***

Please write to AHRTAG if you would like full list of the reference materials used for this special TB and HIV issue.

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