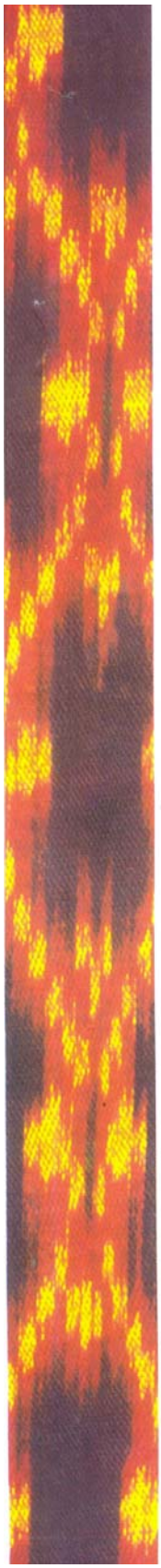

Kingdom of Cambodia

National Religion King

Ministry of Health
National Center for Tuberculosis
Leprosy Control

GUIDELINES

on

COMMUNITY DOTS IMPLEMENTATION

National Tuberculosis Control Program
December 2004

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FORWORD

At present tuberculosis is a major public health problem in the world as well as in the Kingdom of Cambodia. Therefore the Ministry of Health gives high priority to activities for controlling tuberculosis, which contribute to improving health and reducing poverty for Cambodian people.

Based on the Global and National DOTS Expansion Plans, Cambodia National Tuberculosis Control Program (NTP) has been actively performing its tasks in order to achieve the determined objectives, especially the attainment of 100% coverage of DOTS at health centers, maintaining of high cure rate of over 85%, and achieving of 70% of case detection rate of smear positive cases.

By the end of 2004, NTP has covered all health centers with DOTS as planned. Another important activity is the involvement of community in TB care and prevention, which entails the expansion of DOTS to the community level starting from pilot projects being implemented in some operational districts.

This " Guidelines on Community DOTS Implementation " was prepared with the purpose of providing directions for TB control at the community level in line with the National Policies and Strategies for TB Control as well as the overall National Health Policies and strategies.

I hope this document is the basic principles for all partners concerned for the performance of their respective activities in order to achieving the objectives of the National Strategic Plan for TB Control in accordance with the overall National Health Strategic Plan.

Phnom Penh, 27 December, 2004

F. Director General for Health,

CHOU YIN SIM
PHARMACIST

Acknowledgements

On behalf of National Tuberculosis Control Program (NTP) I would like to express deep thanks to WHO and JICA for their technical and financial assistance for the development of this ***Guidelines on Community DOTS Implementation***.

I wish also to extend our gratitude to international and non-governmental organizations such as USAID, URC, CARE, CHC, RACHA, RHAC etc. who have contributed to the formulation of this guidelines, especially in providing financial inputs and experiences concerning field implementation in the communities.

NTP wish also to deeply thank the working group for the development of this document, namely:

Dr. Touch Sareth	Dr. Team Bakkhim	Dr. Keo Sokonth
Dr. Huot Chan Yuda	Dr. Tieng Sivanna	Dr. Saint Saly
Dr. Khloeung Phally	Dr. Khun Kim Eam	Dr In Sokhanya
Dr. Tan Kun Dara	Ph. Ton Chhavivan	Dr. Peo Satha
Dr. Yos Bun Heng	Dr. Prum Chorm Sayoeun	Dr. Kien Sorya
Dr. Chay Sokun	Dr. Kou Sum Mardy	Dr. Sar Sokun and

other NTP staff have made their efforts contributing to successful completion of this guidelines.

NTP would like also to deeply thank Dr. Pratap Jayavanth of WHO; Dr. Kosuke Okada, Mr. Takashi Miura, Dr. Kong Kim San of JICA, who have technically assisted in the formulation of the document.

Moreover, I would like to thank also all TB health workers at all level together with staff of various organizations who have been involved in successful development of this document.

Phnom Penh, 25 December , 2004

Director of CENAT

Dr. Mao Tan Eang

COMMUNITY DOTS

I. INTRODUCTION

At present tuberculosis becomes a major public health problem worldwide. Cambodia is classified by WHO as a country among the 22 high burden countries in the world.

In Cambodia in 2004 , according to WHO, the estimated incidence of rate of smear positive TB was 242 per 100,000 population per 100,000 population and that of all forms of TB was 549 per 100,000 population per year (1). Estimation of death rate due to TB was 107 per 100,000 inhabitants. Therefore, the Ministry of Health gives high priority to TB control activities.

Since 1994, due to the implementation of the Short Course Chemotherapy under Direct Observation for TB treatment (DOT) the National Tuberculosis Control Program (NTP) has achieved cure rates of over 85% as planned.

However, achievements have still been limited because the case detection rate of smear positive TB was only 50% in 1998. In addition, accessing to TB services has been late. From 1994 to 1999, DOT approach was only implemented at hospital- based facilities (hospitalization DOT).

In late 1999 NTP piloted decentralizing DOTS activities to nine health centers (HC) with the emphasis on Ambulatory DOT. This Ambulatory DOT requires TB patients to come to health center to take anti-TB drugs every morning under direct observation of HC staff during the first two months of intensive phase treatment of TB.

As a result, the patients receiving this Ambulatory DOT were those who were, in majority, poor, women and living in remotes areas; and were previously not accessing to TB services.

Therefore, from 2000 NTP has started the expansion of the DOTS strategy. It was until 2001 that the program clearly stated in its five strategic plan for TB control 2001-2005 with the purpose of expanding the DOTS strategy to all health centers by 2005. As a result, by the end of 2003 706 health centers were implementing DOTS (2). And by 2004 around 98 % of all health centers possessed the DOTS services.

During the beginning of the implementation of the DOTS strategy at health center, NTP focused mainly on Ambulatory DOT, i.e TB patients have to come to health center to take anti-TB drugs every morning under direct observation of HC staff. According the evaluation made by TB supervisors, it was observed that not all patients who had been diagnosed as having active TB could receive treatment. This was due to a number of reasons such as elderly people or patients living far from health centers.

To practically address this problem, some health center staff started using " DOT at Home by Health Worker " whereby every morning health center staff have to provide anti-TB drugs to patients at their houses and directly observe the drug-intake. It was observed later that the implementation of the " DOT at Home by Health Worker " were not able to meet the practical needs. The important thing was that health center staff had a lot of tasks to perform and were not able to handle sufficiently the responsibility of drug provision and DOT.

Overall, both “ Hospitalization DOT “ and “ DOT at Home by Health Worker “ could not meet the needs of some patients like the disabled, elderly, or those who live far from health center. Thus, new priority should be considered so as to ensure the application of DOT for those who have difficulties in receiving Ambulatory DOT at health center as stated earlier.

To respond to the necessary needs mentioned above, through collaboration between NTP and a number of NGOs, pilot implementation of Community DOTS has been started in some provinces such as Svay Rieng, Pursat, Kampot and Kampong Chhnang.

The main objectives of this document are to provide general directions, principles and procedures with regards to the organization and application of Community DOTS in operational districts. This paper has no intention to give those directions, principles and procedures in a detailed manner, leaving practical flexibility for each setting with the purpose of attaining effective and successful implementation.

II. DEFINITION OF TERMS

A. Community and DOTS/DOT

-**Community:** may be defined as ‘ a group of people who has something in common and will act together in their community interest....Many people belong to a number of different communities; examples include the place where they live, the people they work with, or their religious group’ .

- **DOTS Strategy and DOT Treatment Approach (3) DOTS** is an effective strategy for TB control. It is a strategy established by WHO taking into account major aspects including managerial and technical. The strategy composes of five elements:

  - Government commitment;

  - TB Case detection by microscopy;

  - DOT treatment approach, standardized treatment regimen with short duration and direct observation;

  - Un-interruption of anti-TB drugs supplies; and

  - Correct recording and reporting system.

So, **DOT** approach is an element of the DOTS strategy. In Cambodia, there are three main DOT approaches: “ Hospitalization DOT”, “ Ambulatory DOT” and “ DOT at Home’. DOT at Home is sub-divided to ‘ DOT at Home by health worker’ and ‘ DOT at home by community member’ (Community DOTS, please see next page).

Hospitalized DOT: is the treatment under direct observation of health worker (HW) when patient swallowing drugs in the hospital during hospitalization in the intensive phase.

Ambulatory DOT: is the treatment under direct observation of HW when non-hospitalized patient swallowing drugs at health facility while coming every morning to the facility during the intensive phase.

DOT at home : is the treatment taking place at patient house under direct observation of HW or instructed person when patient swallowing drugs at his/her house during the intensive phase. DOT at Home is sub-divided to ‘ DOT at Home by health worker’ and ‘ DOT at home by community member’ called Community DOTS.

Community DOTS: is a part of DOT at home whereby TB patients stay at their community during treatment in which patients have to swallow drugs under direct observation of a person selected from the community, who is not health worker. The person who observes TB patients swallowing drugs is called DOTS watcher or DOTS observer.

Community DOTS are activities of TB care related to the Minimum Package of Activities (MPA) of health center to ensure 100% DOT, especially for patients who could not come for DOT at HC or hospital.

B. Case Definition

- Tuberculoses: is an infectious diseases caused by *Mycobacterium Tuberculosis or Bacilli of Koch or BK.* its characteristic is the lesion in the tissues in particular in the lungs
- Tuberculosis Suspect: any person who presents with symptoms or sign suggestive of Tuberculosis, especially cough of long duration.
- Case detection: activity of identifying infectious cases, mainly among adults attending an out-patient health facility for any reason with cough for three week or more, through sputum smear examination.

C. Classification by localization and bacteriology

Pulmonary Tuberculosis-sputum smear positive:

1- Two or more initial sputum smear examinations positives for AFB; or

2- One sputum smear examination positive for AFB plus radiographic abnormalities consistent with active pulmonary TB as determined by physicians; or

3- One sputum smear examination positive plus sputum culture positive for M.Tuberculosis.

Pulmonary Tuberculosis-sputum smear negative:

A Patient with radiography abnormalities consistent with active pulmonary TB; with at least 6 sputum specimens negative; with no response to a course of broad spectrum of antibiotic; and decision by physicians to treat for TB.

Extra-pulmonary Tuberculosis.

Tuberculosis of other organs than the lungs, e.g. lymph notes, pleural, tissues enclosing brain and spinal cord (meningitis), bones and joints etc. Diagnosis should be based on culture positive, histological, or strong evidence consistent with active TB, and by physicians to treat for TB.

D. Category of Diagnosed Patients :

- New case :

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

-Relapse :

A patient previously treated for TB who has been declared cured or treatment completed, and is diagnosed with bacteriologically positive tuberculosis.

-Failure :

A patient who, while on treatment, has sputum positive at month 5 or later between month 5 and end of treatment.

-Return After Default:

A patient who has been treated for at least one month and return with sputum smear positive after interrupting treatment for more than two months.

-Transfer in:

A patient who has been transferred from the treatment center of another operational district (OD) for continuing treatment in another OD.

-Other:

All other cases that are not mentioned in the above five categories. These include chronic cases, those who has sputum smear positive at the end of re-treatment regimen.

Note :

Although smear negative pulmonary cases or extra-pulmonary cases may also be treatment failure, relapse or chronic cases, but this is a rare event (supported by pathological or bacteriological evidence).

E. Definitions of Treatment Result

Cure: a patient who is sputum smear negative at month 5 and the end of treatment (month 6 or 8).

Treatment Completed: a patient who has completed treatment, but who does not meet the criteria to be classified as a cure or a failure.

Treatment failure: a patient who is sputum smear negative at the end of month 5 or later during treatment between month 5 and end of treatment.

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

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

Transfer out: a patient who has been transferred to another treatment facility of another Operational District and for whom the treatment result is not known.

Treatment success: is the combination of cure and treatment completed.

Not: in countries where culture is current practice, patients can be classified as cure or failure on the basis of culture result.

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III. COMMUNITY PARTICIPATION IN HEALTH CARE

The main purposes of section " A", " B" and " C" of this chapter are to provide principles and experiences concerning community involvement in health care taken from a document published by WHO in 2003 (4) for the benefit when considering of implementing community DOTS in Cambodia; while section " D" deals with reasons for the need of Community DOTS in Cambodia.

A. Community Participation in the Delivery of Primary Health Care

In 1997 the World Health Assembly adopted the goal of ' Health for All by the Year 2000 '. In 1978 the joint WHO/UNICEF Conference at Alma Ata accepted primary health care (PHC) as the strategic principle to reach that goal. PHC principles say that health services should be:

- based upon the participation of the population;
- accessible;
- tailored to local needs;
- cost-effective;
- characterized by inter-sector al cooperation; and
- functionally coherent (4).

Community participation is very important because:

- Health will only be improved if people in the community change their attitudes and actions towards the causes of poor health.
- Health services may be misused and underused, and this can only be corrected if the users can help plan the service.
- Community members have untapped resources in terms of money, manpower and materials.
- Health is an issue of social justice and a redistribution of resources in favor of the poor has to be made.

After Alma-Ata meeting many countries have paid more attention on participation of community in health service delivery with clear indication in their general health policies. In Cambodia, the importance of community participation was stated clearly in the " National Health Policies ands Strategies 1999-2003 (5), in which one of the priority areas was the priority to " the delivery of basic health services to all population and with full participation from communities". In 2000 the National Policy on Primary Health Care was developed by the Inter-ministerial Committee on Primary Health Care (6) , in which a highlighted principle was to improve health and promote national development through community participation in health and development activities.

B. Community Involvement in TB Control

A review published by WHO in 1999 highlighted some important features concerning the participation of community in TB control, especially the role in supporting TB patients complete their treatment (4). Establishing the community approach involves several steps including:

- health education of patients and the general community;
- training and supervision of community members contributing to TB care;
- training and supervision of health workers;
- improved provision and supply of drugs; and
- establishment of a suitable recording and reporting system.

The above-mentioned documents suggest that communities can successfully contribute to TB care in a variety of settings. A key point is to broaden the scale and scope from the experiences to attain good results.

C. Ways in Which Community Can Potentially Contribute to TB Care

The Public health approach to TB control rests on detection and cure of the infectious cases. In 1991 the forty-fourth World Health Assembly set targets for global TB control. These are to cure 85% of the infectious TB cases and to detect 70% of such cases. The ways in which communities can potentially contribute to TB control as part of NTP activities are therefore activities which help to improve case detection and treatment outcomes.

The initial emphasis is on improving treatment outcomes rather than intensifying case-finding. It is important to expand case-finding only in setting achieving a high cure rate, otherwise expanded case-finding with a low cure rate results in increased numbers of inadequately treated TB patients (contributing to an increased pool of infectious cases) and increased Drug-resistance. In settings achieving high treatment success rates, it will be valuable to explore how community contribution to TB care can also extend to helping identify TB suspects in order to intensify case-finding.

1 . Direct Observation of therapy (DOT)

One element of the internationally recommended TB control strategy known as the DOTS Strategy is the provision of short-course chemotherapy under proper case management conditions. These conditions include DOT for all smear-positive pulmonary TB patients. DOT is one of a range of measures recommended by WHO to promote adherence to treatment and hence cure.

In many areas patients are admitted to hospital for the first two months of treatment or travel daily or three times weekly to a health center for DOT. This can result in considerable cost to the patient, an economic burden on the family, and may discourage adherence. Organized community groups, peer groups, chosen members of the community, and family members all have the potential to act as supervisors to ensure completion of treatment and hence cure.

2 . Support and motivation of patients

TB treatment is long, symptoms typically disappear well before treatment is complete, and the drugs used may cause side-effects Community members are well placed to help support and motivate patients during treatment. This may be done by raising awareness of the benefits of completing treatment, providing general support, and directly observing patients taking their medication.

3. General Support

In leprosy control and AIDS care programs, home visits by community members and self-help groups are two strategies used to support patients treated in the community. Sharing fears, beliefs and experiences with others with the same disease may be beneficial.

Family support is also clearly critical. Support for patients to promote adherence to treatment should be built into all TB control programs. In addition to enlisting family support, community members can be approached to volunteer as house-to house supporters for TB patients, and the patients themselves encouraged to establish self-help groups.

4. Case detection

Not all people with TB come forward for treatment. Case-finding in the community may help NTPs that already achieve high cure rates to make progress towards the WHO target of 70% case detection. Community-based surveillance has been shown to be sustainable in some settings, as CHWs know their local community well.

CHWs may be involved by referring TB suspects for diagnosis, delivering sputum specimens to health care facilities and collecting result. It is important to clearly define the role of the CHWs in each setting, and diagnosis and prescription of treatment must remain the responsibility of the health professional.

5. Increasing Community Awareness

Many health programs have used informal and formal ways of raising awareness. Leprosy control programs have shown that schoolteachers and students can provide health education and motivate patients to continue treatment. School children have successfully encouraged families to practice hand washing and use latrines. More formally, CHWs were more suitable than physicians as educators to increase compliance in guinea worm eradication programs. Lesson from sanitation programs indicate the importance of the content of the messages with a focus on individual benefits rather than ideal behaviors or community benefits.

The common symptoms of TB are non-specific and TB is also often perceived as a chronic, incurable disease. TB programs could use a variety of community members to help spread messages to TB patients to raise awareness of the benefits of completing treatment. Messages via the mass media could complement those given by community members. Messages could encourage patients to complete treatment in order to restore full participation in society and prevent relapse or drug resistance.

TB control programs could take advantage of existing community resources to enhance community knowledge of TB. Community members already directly involved with TB patients could collaborate with health workers to provide patients with accurate information regarding length of treatment and know of side effects.

Various community members, including village leader, schoolteachers, CHWs, religious leaders, trade unions and women's organizations, have the potential if mobilized to successfully raise awareness of the signs and symptoms of TB and the availability and benefits of its treatment. However awareness campaigns will only have a positive impact if diagnosis is available and treatment readily accessible.

6. Access to Drug

TB treatment and control requires an uninterrupted drug supply. Distribution of drugs is an acceptable, effective and sustainable function for a CHW, and it may empower the community by providing access to treatment, enhancing the status of the CHW, and addressing the true needs of communities. Interestingly, communities may attach a higher value to CHWs that provide drugs than to those that focus on preventive and promotive care only. Thus involving the CHWs in TB drug distribution may enhance their status and hence the impact of other programs.

Practical lesson that have been learnt from community-based drug distribution programs include:

- Programs are dependent on good drug supply at central stores down to district and health center level
- Communication between drug distributors and stores is essential
- Programs planned by the community are more likely to be sustainable than those planned by health professionals
- The higher the level of participation the greater the success of the program
- Home visits for drug delivery, while apparently very convenient, are not always welcomed by patients with stigmatized diseases(including TB)
- Community members are able to evaluate the appropriateness of house-to-house versus central distribution and change their strategy accordingly

D. Why Community DOTS in Cambodia ?

It is not different from other countries, community participation in TB control is of necessity for NTP to reach its objectives of reducing to a maximum degree the transmission, morbidity and mortality rates of TB in communities.

NTP has been implementing DOTS very successfully at hospital and health center levels. This will be the key basis for NTP to be able to involve community in TB control.

Experiences of DOTS at HC have indicated clearly that " Ambulatory DOT" and " DOT at Home by Health Staff " are insufficient for TB control activities.

Community DOTS implementation is believed to contribute to :

- improving service accessibility especially for those living far from health facilities;
- early case detection and treatment;
- increasing case detection and cure rates;
- reducing the rates of defaulter, transmission, and death of TB;
- reducing anti-TB drug resistance;
- reducing treatment related costs in particular travel expense;
- poverty alleviation;
- supporting the implementation of the new 6 month regimen especially in the continuation phase.

IV-POLICY ON COMMUNITY PARTICIPATION AT HEALTH CENTER

This chapter deals with general policy and principles concerning community participation with health center taken from the Document " POLICY ON COMMUNITY PARTICIPATION AT HEALTH CENTER" issued by Cambodia Ministry of Health in February 2003.

A-Policy Objectives of Community Participation

The Community Participation should be promoted with the aim to achieve the values and working principles of the Ministry of Health on one hand, and to encourage the Community to actively participate through various mechanisms in the development of health centers on the other hand. The policy objectives of the community participation, therefore, are defined as follow (7):

POLICY OBJECTIVES OF COMMUNITY PARTICIPATION IN HEALTH CENTER DEVELOPMENT

To involve the community in the process of the development and the management of health centers in organizing accessible, affordable, effective, sustainable basic health services of good quality , adapted to the health needs of the people in community.

To increase the Health Center team's accountability to the users regarding their duty to provide such quality services and in view of the need of the community.

To encourage the community members to make appropriate use of the HC services and to promote informed health -seeking behavior by the community members.

To mobilize local resources in cash and/or in kind to support the development and the functioning of the HC in sustainable and cost-effective service delivery.

B. Principles of Community Participation in Health Center

The Community participation is developed and organized based on 5 principles (4):

- *Ownership / Representation*
- *Voluntary / Independence*
- *Gender balance*
- *Transparency*
- *Partnership*

1. Ownership / Representation

For a stronger commitment and a better representation of the community, it is extremely important that the community itself, not through administrative appointment, select their representatives through a free and fair election. In so doing it is hoped that the elected representatives are able to express freely and openly their views and concerns without any Interference.

In addition, this election will promote community perspectives of the fact that the health center belongs to their community (ownership). Health staff cannot be representative of the community in any structures of community participation in order to avoid conflict of interest.

2. Voluntary and Independent

For sustainable involvement, the elected-community representatives are encouraged to work on voluntary basis and this is explained before the election takes place. There is no financial or material incentive as reward for their involvement, but they themselves can get some benefits.

If community representatives are to be reimbursed for their travel expenses to attend the meetings with HC team, the commune council ,according to procedures of financial management of the commune or community funds , should provide budget for this if possible in order to keep community representatives and their opinions independent from the Health Center.

3. Gender Balance

For the trade-off between male and female's view, equal representation of men and women in any structure of community participation has to be realized. The female community representatives are to encourage, as women are more aware of the needs for their own health and their children's and more concerned of family issues.

It is important to note that the representative of the poor living in the community should be provided an opportunity to have a " ***voice*** " in community participation process.

4. Transparency

Interaction and communication between Health Center staff and community representative should be based on a ***two-way transparency***. In this regard HC staff provide to the Community representatives on a monthly basis a HC report on activities and finances (incomes from the MOH, patient's fees, assisting organizations, and expenses including bonus for HC staff).

They allow them to access the all original record and keeping books for verification, if requested. In turn the community representatives express frankly and honestly all issues related to improvement of HC services including community satisfaction and constructive criticism.

5. Partnership

Establishing a good **Partnership** between the communities, the Health Center Team, the health personnel of the Operational District and Provincial level, the local authorities and other sectors including civil society and NGOs is essential. In this the commitment of the Health Center Chief is a key to determine the effectiveness of the participation by the community in Health Center.

Partnership requires all partners to build a common vision and work together towards achieving the policy objectives of the community participation for the sake of the community members.

V. MAIN PRICIPLES OF COMMUNITY DOTS IN CAMBODIA

A. Starting and Implementing Community DOTS

To start Community DOTS (CDOTS) request from Province Health Department (PHD) and approval from NTP are required. In principle, CDOTS is allowed to be implemented only in places where HC are providing DOTS.

The request for implementing CDOTS has to be attached with Technical Proposal, which describes goals, objectives and activities organization and work relationship etc. with partners concerned including PHD and Operational District (OD).

This is a prerequisite before CDOTS implementation. The development of Technical Proposal requires involvement from main partners concerned, which encompasses community representatives, HC, RH , OD, PHD, Donor, persons in charge of TB control activities at PHD and OD level. And the proposal has to be agreed by PHD director.

To start Community DOTS , request from Province Health Department and approval from NTP are required

Important Activities for Community DOTS

- Sensitizing Workshop on CDOTS
- Development of Training Curriculum on CDOTS
- Training of HC staff on CDOTS
- Selection of HC including villages or catchment areas
- Training of DOTS observers
- Assurance of resources for functioning of CDOTS
- Implementation, monitoring and evaluation of CDOTS

B. Community DOTS and Utilization of General Health Services

The implementation of CDOTS needs to be balanced with the impact on the utilization of general health services, doing in such a way that can improve the use of public health services. That is to say, not all patients diagnosed by a HC as having TB should be on CDOTS, for it might desert or make HC less busy and may lead to reduction of health service users.

In contrast, if TB patients come to HC every morning, they may help make HC more busy and may also attract other patients to come for services. Besides, if HC is not frequented, TB suspects could not be identified, for TB case detection is focused mainly and conducted through passive approach; i.e. identifying suspected TB patients among OPD attendant of HC.

In addition, the design of CDOTS must support the functioning of HC, RH, OD and PHD in general; for instance the support to supervision and incentives schemes.

> The implementation of CDOTS must support the utilization of general health services

C. Training on Community DOTS

1.Training of Health Center Staff

Staff of HC implementing CDOTS have to receive training on CDOTS separately from general TB Training.

2. Training of DOT Watchers

Those who were selected as DOT watchers or observers have to receive training on CDOTS in line with standardized curriculum of NTP. This type of training is a prerequisite before CDOTS implementation.

The curriculum include definition of TB, ways of transmission, suspected symptoms of TB, treatment and monitoring of treatment, prevention of TB, appropriate treatment sites. The training should also cover roles and function to ensure effectiveness of the relationship of DOTS watchers and health workers as well as other relevant partners.

Those who were selected as DOT watchers or observers have to receive training on CDOTS in line with standardized curriculum of NTP

D. Partnership

Building good partnership between community, health center staff, OD staff and health workers at PHD level, local authorities, various sectors including civil society together with NGOs is necessary factor for CDOTS to be successful. Partnership requires all partners to have common vision towards reaching goals for the benefit of the whole community, especially in improving health and well being of all members of the community.

The implementation of CDOTS is encouraged in places where there is potential partnership, which includes:

- Existence of NGO(s) that is (are) helping health services in OD or HCs.
- Active commitment from local community such as supports from commune council under the form of materials and ideas/appreciation.
- Willing and commitment from health authority to have CDOTS in particular location, etc.

E. Motivation to Community DOTS Participation

In CDOTS functioning high attention should be paid to motivation system for persons involved in the process. The top priority should be given to HC staff and community members. The types of motivation include ideas/appreciation, materials and finance. Due to the difference of resource situation in various communities, rates or levels of motivation cannot be standardized. All partners should jointly make efforts in mobilizing resources and decide on the forms and rates/levels of motivation based on some factors, especially cost-effectiveness and sustainability.

F. Sustainability and Ownership

In CDOTS implementation attention should be paid to the sustainability of the strategy. For instance, approaches using appropriate resources such as reasonable cost and the selection of members of village health support group (VHSG, formerly called feedback committee) as DOT watchers could be considered as approaches with potential sustainability.

As previously stated importance should be given to ownership concerning the design, implementation, monitoring and evaluation of CDOTS. Community representatives should attend all activities related to CDOTS. Importance of ownership for CDOTS should also be given to HC, RH, OD and PHD.

G. Community DOTS Supervision

Appropriate and regular supervision of CDOTS watchers and patients by HC staff is key for CDOTS to be successful. The implementation of CDOTS necessarily requires supervision by HC staff and staff of health facilities allowed to provide TB services. Therefore, ensuring sufficient resources for CDOTS supervision is a prerequisite before starting CDOTS.

> Ensuring sufficient resources for CDOTS supervision is a prerequisite before starting CDOTS

H. Main Activities in Intensive Phase of TB Treatment

TB patient and CDOTS supervisor should meet every week in which CDOTS supervisor has to make sure that the patient has been taking drugs every day. In principle, the distribution of drugs should be done weekly. CDOTS watcher (or TB patient) may receive drugs from health center every week according to agreement. If possible, HC staff may also take drugs and give to CDOTS watcher or TB patient in the community. Drugs can be kept with CDOTS watcher or at TB patient's house. Both CDOTS watcher and patient have to tick in their cards (yellow and red cards) after drug taking. Make sure that the patient is taking drugs under direct observation of CDOTS watcher every morning at patient's home or other places as appropriate.

CDOTS watcher has to pay attention to monitor drug side effects and suggest TB patient to come for consultation with HC staff as well as urgently give information of drug side effects if any.

I. Main Activities in Continuation Phase of TB Treatment

TB patient and CDOTS supervisor should meet at least every two week. TB patient should come to HC every month. In principle, the distribution of drugs should be done at least every two week. CDOTS watcher or TB patient may receive drugs from health center every two week according to agreement. If possible, HC staff may also take drugs and give to CDOTS watcher or TB patient in the community. Drugs can be kept with CDOTS watcher or at TB patient's house. Both CDOTS watcher and patient have to tick in their cards (yellow and red cards) after drug taking. Make sure that the patient is taking drugs under direct observation of CDOTS watcher every morning at patient's home or other places as appropriate.

J. Sputum Follow-up Examination

TB patients should come to HC and give sputum for follow-up examination themselves. In case in which they could not come to HC due to good reasons, sputum specimens could also be collected in the community with direct observation of health worker. In general, patients will be given continuation or stopping of treatment according to the results of sputum follow-up examination.

K. Monitoring and Evaluation

CDOTS implementation requires the design and application of timely and regular monitoring and evaluation activities. This is based on the main indicators related to CDOTS overall (please refer to page 39) as well as indicators specifically concerned with each individual project.

Prerequisites Before Starting CDOTS

1. Proposal from PHD and approval from NTP
2. Technical proposal
3. Training on CDOTS
4. Ensuring resources for supervision

VI. ELIGIBLE PATIENTS FOR COMMUNITY DOTS

In Cambodia, as stated earlier three main DOT treatment approaches are being used, namely:

- Hospitalized DOT
- Ambulatory DOT
- DOT at Home, which is divided into two- sub-approaches: DOT at Home by HC staff and DOT at Home by community volunteer (Community DOT, please see definition on page 9).

When a TB patient has been found and registered health worker has to decide on what DOT approach appropriate for the patient. Eligible TB patients for CDOT are those who could not come every morning to HC or RH for drug taking such as the disabled, AIDS patients, patients living far away (from health facility), elderly, school children, monks, children, etc.

However, the determination of the concrete eligibility criteria or limit for CDOT is of great difficulty (like distance from home to HC.). NTP leaves the decision to local implementers by taking seriously into account some factors, especially factors and impact related to the utilization of general services of the HC as described in page 29 as well as some difficulties with regard to the patient side.

VII.COMMUNITY DOTS SUPERVISOR

A. General Principles

As described earlier the main purpose of CDOTS supervision is to make sure that TB patients have been taking drugs regularly and directly observed by CDOT watchers (observers). The patients, CDOT watchers, and supervisors should regularly meet together in the community, at HC or in the hospital. People who do the supervisory activity of community DOTS are called CDOTS supervisors.

B. Who Can be Community DOTS Supervisor

- Health staff of TB units
- Health staff of HCs trained with TB control activities
- Health professional of NGOs of TB treating facilities recognized by NTP (applied only for NGOS allowed to provide TB services by NTP like Center of Hope Hospital).

Besides, NGOs' staff who are locally assisting CDOTS activities could also help perform supervisory activities with health workers of TB units or HCs.

C. Roles of CDOTS Supervisor

- Field visits to community to see CDOT watchers and TB patients
- Discussions with TB patients and CDOT watchers; supervision of the filling up of treatment cards (red card for patient / yellow card for DOT watcher); counting of drug tablets to make sure that patients correctly implement DOT
- Monitoring of anti-TB drugs side effects; if any to address them appropriately
- Provision of health education on TB to TB patients or CDOT watchers if necessary
- Filling up of TB treatment card kept at HC (white card for HC)
- Identification of TB suspects among contacts within the family of TB patients and explain to them to go for diagnosis.

Correct and appropriate supervision on CDOT watchers and TB patients is key for CDOTS to be successful

VIII. COMMUNITY DOT WATCHER OR OBSERVER

A. Who Can be Community DOT Watcher

Who should be Community DOT Watcher (CDOT watcher) ? Any persons who have been trained by health worker and voluntarily wish to work for CDOTS can be selected as CDOT watchers in the exception of TB patient family members. They should be volunteers: Village Health Support Group Members (VHSG), NGO staff working locally, community leaders, health service providers including private sector such as traditional birth attendants (TBA) and school teachers.

B. Roles of Community DOT Watcher

- Daily direct observation of drug taking by TB patients
- Keeping anti-TB drugs for patients (in case where drugs are not kept with TB patients)
- Filling up TB treatment card for DOT watcher (yellow card) after watching patient swallowing drugs
- Support to patient to continue the treatment till completion
- Provision of health education on TB and encourage TB suspects to go for diagnosis
- Identification of TB suspects among TB family contacts
- Meeting with and report to CDOTS supervisor on information encompassing side effects of anti-TB drugs
- Collect anti-TB drugs from HC when the patients are not able to go to HC

(Please see more details on pages 47 and 48)

IX. INFORMATION SYSTEM

CDOTS implementation requires existence of simple, practical and reliable information system.

Main elements of information system concerning CDOTS includes:

- TB Treatment Card for Patients (Red Card)
- TB Treatment Card for DOT Watcher (Yellow Card)
- Tuberculosis Treatment Card (White Card)
- Form for Case Detection Among TB Suspects
- Referral Slip
- TB Patient Book
- Monthly Activity Report

Main indicators related to CDOTS encompass:

- TB suspected cases referred for diagnosis by CDOT watchers
- Number of people received health education by CDOT watchers
- Number of TB patients treated under CDOT
- Proportion of CDOT patients among all TB patients treated
- Number of CDOTS supervisory visits by HC staff
- Number of CDOT watchers trained on CDOTS
- Number of meeting on monitoring of CDOTS conducted.
- Cure rate of CDOT patients.

X. IMPORTANT INFORMATION FOR COMMUNITY DOT WATCHER

The main purpose of this chapter is to provide information on TB that health workers should be aware of and disseminate to CDOT watchers as well to the general public.

A. What is Tuberculosis?

Tuberculosis is an infectious and dreadful disease caused by Mycobacterium Tuberculosis, which is shortened to local language *"Bei Kar"* (BK). TB is not a hereditary disease as misperceived by some of our people.

TB may affect various organs of the human body. Most frequently, it affects the lungs causing pulmonary tuberculosis, which can transmit to other persons. TB can also affect other organs leading to extra-pulmonary tuberculosis such as tuberculosis of lymph notes, pleura, nervous system, intestines, and bones.

If a TB patient correctly follows health worker's suggestions, TB is 100% curable. Inadequate treatment of TB will lead to drug resistance and death. Currently, the diagnosis and treatment of TB are free of charge.

B. Symptoms of Suspected Tuberculosis

1. Pulmonary Tuberculosis

The major sign of pulmonary TB is persistent cough for three weeks or more, generally productive cough. Those presenting with this sign should urgently have their sputum specimens examined. This cough is generally accompanied by one or more of the following signs: loss of weight, tiredness, fever, night sweats, chest pains, shortness of breath, loss of appetite, haemoptysia, etc.

2. Extra-Pulmonary Tuberculosis

Symptoms of extra-pulmonary TB depend on the organ involved. For example, discomfort and swollen joint for bone TB. Extra-pulmonary TB is also accompanied with general symptoms like fever, night sweats, loss of appetite, and tiredness. It is difficult to come up with concrete diagnosis of extra-pulmonary TB; and it depends on the availability of diagnostic tools such as biopsy and histological examination.

The most frequent forms of extra-pulmonary TB are: tuberculosis of lymph notes, pleura, nervous system, bones, and miliary TB.

So, some symptoms of TB are similar to that of the other diseases. Therefore, it is important for the patients presenting symptoms as described above, suspected TB cases, to go to HC or RH and receive diagnosis and treatment.

3. Tuberculosis Infection

After Mycobacterium Tuberculosis entered into the body, the immune defense system of the body responds to contain the spread of the mycobacteria. The micro-organism remains dormant within the body. This situation is called TB infection. The persons with infection TB neither present any symptoms nor transmit the microorganism to the others.

4. Active Tuberculosis (TB Disease)

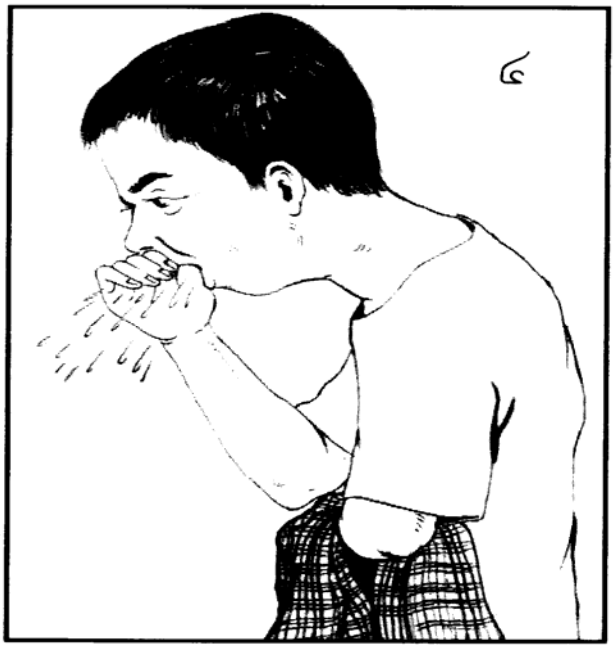
After becoming infected (TB Infection), when the persons are in good health the immune defense system reacts and prevents them from becoming ill. In contrast, when their health is deteriorated, they are malnourished, especially with HIV infection; their immune system become less defensive and the micro-organism begin to multiply, causing active tuberculosis (TB Disease).

The major sign of pulmonary TB is persistent cough of more than 3 weeks. When suspected of having TB, please go to health center or referral hospital for timely diagnosis and treatment

C. TB Transmission

TB is so harmful to the others, for it easily spreads from one person to another. In general, only pulmonary TB is infectious. When a pulmonary TB patient coughs, sneezes, or speaks loudly TB microorganisms come out of the lungs with the droplets into the air. People staying near to the patients may inhale the droplets containing the microorganisms and may be infected. TB can easily transmit to the family members if they live in an enclosed and small space with little or insufficient sunlight or ventilation.

When a pulmonary TB patient coughs, sneezes, or speaks loudly tuberculosis can be transmitted to other people



D. Treatment of Tuberculosis

If a patient has been found to be having active TB he or she must receive treatment with oral or injectable medications. Health education prior to and after the treatment is essential so that the patient is fully aware of the importance of the treatment and is convinced to undertake medications till treatment completion according to the technical protocol. TB treatment requires longer period than most of the other communicable diseases. To completely kill TB microorganisms, the patients have to receive treatment of long duration from 6 to 8 months, which is divided into two phases.

- Intensive Phase

This phase lasts for two to three months depending on the treatment categories. During this phase TB patients can be hospitalized and taking drugs directly observed by health worker (hospitalized DOT) or staying at home but come to take drugs under direct observation of health workers at hospital or health center (ambulatory DOT). Besides, the patients can also be taking drugs in the community under direct observation of health workers called " DOT at home by health worker " or under direct observation of community members called " DOT at home by community member or community DOT". In the latest case CDOT watcher or TB patient comes and collects drugs from HC or RH every week according to the agreement.

- Continuation Phase

This phase lasts for four to five months depending on the treatment categories. During this phase TB patient CDOT or watcher have to come and collect drugs from HC or RH at least every two week; and take drugs under direct observation of community member.

E. Why TB patients need to be Treated Correctly, Adequately and with Complete Duration ?

Drugs for the treatment of TB are called anti-TB drugs. TB is curable if patients regularly take anti-TB drugs with sufficient dosage and complete duration, though after a certain period of drug taking they have felt better.

TB can cause death if patients did not receive treatment or they did undertake the treatment but in an incorrect and incomplete way.

TB patients who did not receive correct treatment will result in TB microorganisms resistant to anti-TB drugs, which is hard and expensive for the treatment.

If TB patients did not correctly take anti-TB drugs, they may continue to spread the disease to other members of their families and community.

Taking inadequate anti-TB drugs and incomplete treatment cannot cure TB.

Correct and regular taking of anti-TB drug and with complete duration is necessary. Otherwise TB patients may die or continue to spread the disease in the community, which is hard and expensive for the treatment

F. How to Prevent and Reduce TB Transmission

- Make sure that TB contacts receive TB diagnosis when they present symptoms of suspected TB.

- Patients have to receive and complete the treatment; this will end the transmission to the members in the family and to the community.

- Pulmonary TB patients or suspected pulmonary TB persons must cover their mouths and noses with handkerchief or " Krama" when they cough, sneeze or talk to people.

- Make houses clean/hygienic, with sunlight and good ventilation.

- Bring children for immunization against TB.

G. Roles and Tasks of Community DOT Watcher

1. Roles of CDOT Watchers

Community has decided to select you as CDOT watchers and has confidence in you. Your main role is to make sure that your patients have been regularly and timely taking drugs till treatment completion. It is important that the patients have confidence in you and discuss some concerns or problems with you. Patients may experience anti-TB drug side effects and may be shy or have some stigma with their disease (TB). Reassurance to patients concerning side effects to convince them to complete treatment is your necessary task.

> Your main role is to make sure that your patients have been regularly and timely taking drugs till treatment completion. Listening to and encouraging patients are necessary for you as part of this supporting activity.

2. What are the Important Tasks of CDOT Watchers?

As CDOT watchers you have the following main tasks:

- Agree with patient on locations and time for the meeting with each other.
- Provide anti-TB drugs to patient when you meet each other; check drugs; make sure the patients have taken drugs.

- Fill up TB Treatment Card for DOT Watcher (Yellow Card) and ask patient to fill up TB Treatment Card for TB Patient (Red Card).

- Report about the occurrence of anti-TB Drugs side effects. Ask patient to take drugs with light meal or porridge to reduce nausea. Refer patient to treating facility (HC or RH) if side effects still occur.

- Encourage patient to complete treatment.

- Address the issues immediately if the patient did not regularly come for drug taking. After 24 hours of failing to take drugs, go to see the patient at his or her house. If causes could not be found or you could not convince the patient to continue the treatment, report immediately to health worker of treating facility.

- Collect drugs at HC. Present TB Treatment Card to HC staff. Check whether in what situation the patient is and discuss some issues.

- If either you or the patient have to travel for a few days, give sufficient drugs to patient, but not more than one week or refer patient to HC for decision-making. Other persons could be asked to help during this period (of your absence).

- Make sure that patient go to HC for sputum follow-up examinations.

H. How to Use TB Treatment Card for DOT Watcher

To completely kill TB microorganism TB patients have to appropriately take anti-TB drugs. You are (CDOT watcher) a supporter and have to make sure that the patients have been correctly taking drugs. TB treatment Card for DOT Watcher (see sample in annex) will help you keep track whether anti-TB drugs have been taken appropriately or not. It is important that you have to be sure that the patient has taken drugs timely/correctly, then tick (√) in case you have watched the drug swallowing.

Every time you have observed drug taking, tick (√) in the appropriately date corresponding box of TB treatment Card for DOT Watcher. In case you did not see patient swallowing drugs, draw a hyphen-sign in the appropriately date corresponding box.

Before drug stock out you have to go and show the TB treatment Card for DOT Watcher to HC staff. HC staff will check whether drugs have been appropriately taken; and then provide you with drugs for patients.

I. How Does Community DOT Watcher Provide Anti-TB Drugs ?

Community DOT Watcher will fill up in the TB Treatment Card concerning anti-TB drug taken by patient every time when the DOT watcher and patient meet. When the patient come:

- You have to have TB Treatment Card for DOT Watcher (Yellow Card).

- One glass of water for the patient (for those who have nausea, drugs can be taken with light meals or porridge).

- Take out anti-TB drugs for the patient for Today.

- Put anti-TB drugs in the patient's hand, and then watch the patient swallowing drugs. When the patient faces difficulty in taking drugs, ask him or her to take drugs tablet by tablet. Anti-TB drugs have to be taken completely so as to completely kill TB microorganism.

- Record (tick) in the TB Treatment Card for DOT Watcher (Yellow Card) and ask the patient to do the same in the TB Treatment Card for Patient (Red Card).

Always watch the patient swallowing anti-TB drugs till he or she finishes all the tablets for the day.

J. What are the side Effects of Anti-TB Drugs?

Tell patients that anti-TB drugs can sometimes cause side effects. So, TB patients have to inform you (CDOT watcher) if certain effects occur. Some side effects cannot cause big problems (minor side effects); in this case what you should do only reassure to patients. On the other hand, some side effects can endanger patient health; in this case treatment must be stopped and patients have to be referred to HC or RH staff for consultation.

Side Effects of Anti-TB Drugs	Solutions
Minor Side Effects	**Continue treatment**
- Nausea, loss of appetite, abdominal discomfort	- Reassurance to patient and ask patient to take drugs with light meal or porridge
- Yellowness or redness of urine	- Reassurance to patient
- Joint discomfort	- Refer patient to the treating facility
- Foot pain	- Refer patient to the treating facility
Major Side Effects - Skin irritation, rashes - Jaundice - Frequent vomiting - Deafness - Dizziness - Vision impairment	Stop treatment and urgently refer patient to treating facility

K. Community DOT Watcher Can Make Change

It is sure that adequate and timely drug taking can cure TB. By listening to TB patients and supporting them you (CDOT Watcher) can encourage the patients to take anti-TB drugs till treatment completion. Adequate drug taking by TB patients can also prevent TB from infecting other members of the family as well as the community members.

Community DOT watcher can improve patient health avoiding suffering or death as well as preventing tuberculosis from infecting other members of the family as well as the community members.

XI. REFERRENCES

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XII. ANNEX

Ministry of Health

National Center for Tuberculosis and Leprosy Control

OD Register Number .....

Patient Book Number.....

	IP	CP
Hospitalized DOT	☐	☐
Ambulatory DOT	☐	☐
Non-DOT	☐	☐
Community-DOT	☐	☐
Home Care DOT	☐	☐

Tuberculosis Treatment Card

Treating facility.....Date of starting treatment .....

Patient's Name.....Age.....years. Sex M ☐ F ☐

Permanent Address.....

Other Address and name of contact person.....

BCG : No Scar ☐ Scar seen ☐ Scar dubious ☐

Type of TB

- **S (+) PTB** ☐
- **S (-) PTB** ☐
- **EPTB** ☐

Site :.....

.....

.....

Category of TB

- **New Case** ☐
- **Transfer in*** ☐ **out**** ☐
- **Return after defaulter** ☐
- **Relapse** ☐
- **Failure** ☐
- **Other***** ☐

Month	Sputum Smear Examination			Weight (Kg)
	Date	Result	Laboratory Number	
0				
2/3 3/4				
5				
6/ 7/ 8				

1-Initial Phase

Please, tick (✓) in the corresponding box and write down the number of daily tablets

Category 1	Category 2	Category 3
New Case ☐	Retreatment ☐	New Case ☐
- S (+) PTB, TB/AIDS	Relapse, failure, other	- S (-) PTB non severe
- S (-) PTB, or Sever EP	Return after defaulter	- EP non Severe

Adult ☐ ☐ ☐Every day (2 months) RH Z E ☐ ☐ ☐ ☐ Every day S(RHZES:first 2 months) RH Z ☐ ☐ Everyday (2months) RH Z

Children ☐ ☐ ☐Every day (2 months) RHZ + E or S (in case of TB Meningitis) (RHZE: third month) ☐ Everyday (2months) RHZ

(RH: Rifampicin-Isoniazide, RZH: Rifampicin, Isoniazide and Pyrazinamide, E: Ethambutol, Z: Pyrazinamide, S: Streptomycin)

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Please, tick (✓) in one corresponding box while watching patient swallowing drugs in one time and mark a line (-) if not seeing the patient swallowing drugs and not mark any sign if the patient not having collected drugs.

* Transferring patient to another treating facility in the same Operational District (not recording this "transfer in" inTB Patient Book)

** Transfer patient to another treating facility in different Operational District.

*** Please indicate clearly the type of TB in the blank space in section " Note" on the second page of this card

2-Continuous Phase

	Category 1	**Category 2**	**Category 3**
	New Case ☐	Retreatment Case ☐	New Case ☐
Adult	☐ Every day (4months) RH	☐ ☐ Every day (5months) RH E	☐ Everyday (4months) RH
Children	☐ Every day (4 months) RH		☐ Everyday (4months) RH

ខែ / ឆ្នាំ	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

Please tick (✓) in the corresponding box while watching patient swallowing drugs and mark a line (-) if not seeing patient swallowing drugs and not mark any sign if the patient not having collected drugs.

Note:

Please, Note all important activities and date, side effect of drugs, follow up and solution, BK (-) and Extra pulmonary diagnosis, etc:

.....

.....

.....

.....

.....

.....

Treatment Outcome

Cured ☐ . *Completed* ☐ . *Died* ☐ . *Failure* ☐ . *Defaulter* ☐. *Transfer in** ☐. *Transfer out*** ☐

if transfer out (internal or outside OD) please indicate clearly the health facility in which the patient were transferred to :

Treating facility .....*Operational District*.....*Province*.....

Date..... *Month* .....*Year 20*.....

Signature

* Transfering patient to another treating facility in the same Operational District (do not record this "transfer out"in the " Result of Tretament" of TB Patient Book but should note in the " remark" column (29th column) of the TB Patient Book.

** Transfering patient to another treating facility of a different Operational District (Should record this "transfer out" in the TB Patient Book at 28 th column in case of not known their treatment outcome).

Recommendations

✱ TB can be cured if:

- The patients take TB drugs regularly according to recommendations of health staff or DOT watcher.
- If there are any side effects, the patient should inform the health staff or DOT watcher.
- After swallowing TB drugs, the patients should tick (✓) in the box corresponding the day of taking drug
- Should consider the DOT watcher as a relative or friend.

✱ TB diagnosis and Treatment are free of charge at all kind.

Patient Signature	DOT watcher Signature	TB Supervisor Signature

Ministry of Health

National Center for Tuberculosis and Leprosy Control

TB Treatment Card for Patient

Patient's name……

Patient's serial number in TB patient Book……

Date of starting treatment……

Permanent Address……

Sex : Male ☐ Female ☐ Age ……years

Name of treating facility……OD……

Province:……

TB type: BK (+) ☐. BK (-) ☐. EP ☐

Month	Sputum smear Examination			weight (Kg)
	Date	Result	Laboratory number	
0				
2 / 3 3 / 4				
5				
6 / 7 / 8				

Note : Please keep this card in good condition .Bring this card, every time you go to health facility (even in the treatment period or after treatment). Tick (✓) in one corresponding blank box when the patient swallowing TB drugs under direct observation of health staff of DOT watcher .Draw a line (-) when the patient swallowing TB drugs by themselves and do not mark any signs when the patient not having collected TB drugs.

1-Innitial Phase

	Category 1	Category 2	Category 3
Adult	☐ ☐ ☐ Every day (2 months) RH Z E	☐ ☐ ☐ ☐ RH Z E S	☐ ☐ Everyday (2months) RH Z
	(Everyday: first two months for RHZES and third month for only RHZE)		
Children	☐ ☐ ☐ Every day (2 months) RHZ + E y S (in case of TB Meningitis)		☐ Everyday (2months) RHZ

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

2-Continuation Phase

	Category 1	Category 2	Category 3
Adult	☐ Every day (4months) RH	☐ ☐ Every day (5months) RH E	☐ Everyday (4months) RH
Children	☐ Every day (4 months) RH		☐ Everyday (4months) RH

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

(**TB Treatment Card for Patient (Red Card) : Back page**)

Recommendations

- Consider the Patient as a friend or relative
- Communicate with health staff regularly and when there are any changes in patient's health conditions.
- Provide TB drugs regularly and in sufficient dosage to patient according to recommendations of Health Staff
- Watch the patient swallowing TB drugs till the end and tick (✓) in the corresponding box.

* TB diagnosis and Treatment are free of charge

Patient Signature | DOT watcher Signature | TB Supervisor Signature

Ministry of Health

National Center for Tuberculosis and Leprosy Control

TB Treatment Card for DOT Watcher

DOT Watcher's name.....
Sex : Male ☐ Female ☐ Age .....years
Occupation.....
Patient's name.....
Serial number in TB Patient's Book.....
Date of Starting treatment .....
Permanent Address.....
Sex : Male ☐ Female ☐ Age .....years
Treating facility .....District.....
Province.....
TB type: BK (+) ☐. BK (-) ☐. EP ☐

Month	Sputum Smear Examination			Weight (Kg)
	Date	Result	Laboratory number	
0				
2 /3 3 /4				
5				
6 / 7 /8				

Note : **Note** : Please keep this card in good condition .Bring this card, every time you go to health facility (even in the treatment period or after treatment). Tick (✓) in one corresponding blank box after having watched the patient swallowing TB drugs .Draw a line (-) if did not watch the patient swallowing drugs and do not mark any signs when the patient not having collected TB drugs.

1-Innitial Phase

	Category 1	Category 2	Category 3
Adult	☐ ☐ ☐Every day (2 months) RH Z E	☐ ☐ ☐ ☐ RH Z E S	☐ ☐ Everyday(2months) RH Z
	(Everyday: first two months for RHZES and third month for only RHZE)		
Children	☐ ☐ ☐Every day (2 months) RHZ + E y S (in case of TB Meningitis)		☐ Everyday(2months) RHZ

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

2-Continuation Phase

	Category 1	Category 2	Category 3
Adult	☐ Every day (4months) RH	☐ ☐ Every day (5months) RH E	☐ Everyday (4months) RH
Children	☐ Every day (4 months) RH	☐ Everyday (4months) RH	

Date	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31

（TB Treatment Card for DOT Watcher(Yellow Card) : Back page）

MAIN GOAL AND OBJECTIVES OF NTP

The main goal of NTP in Cambodia is to contribute to improving the health of the Cambodian people in order to contribute to socio-economic development and poverty reduction in Cambodia by reducing the morbidity and the mortality rates due to tuberculosis.

The major objectives of the NTP are to ensure equity and access to TB services and to maintain a high cure rate of more than 85% and a high case detection rate of at least 70% by the end of 2005.

Another aim of NTP is to promote early case detection. Detection activities are extended only when cure rate is high. Besides, high cure rate is an attracting factor for more TB suspected cases to come.

STRUCTURE, ROLE AND FUNCTIONS OF NTP

A. Central level

The National Center for Tuberculosis and Leprosy Control (CENAT) assumes overall responsibility for the National Tuberculosis Control Program (NTP) to be implemented countrywide through the health care delivery system in Cambodia.

The major roles and functions of NTP are:

- Formulation, monitoring and evaluation of the national policies, strategies, guidelines, protocols and plans for TB control
- Organization of continuing training to health workers involved in TB control at all levels
- Provision and/or reinforcement of supervision and monitoring of TB control activities at all levels
- Organization of surveillance and research on topics relevant to the NTP
- Promotion of information-education-communication activities for TB control
- Development of the National TB Reference Laboratory and the network for an effective referral system
- Coordination of TB control activities including those conducted by other government agencies, IOs, NGOs and the community
- Coordination of partners, mobilization of resources and advocacy
- Contribution to the development of the health care system in both public and private sectors.

B. Province Level

Under the responsibility of the chief of Technical Bureau of the Province Health Directorate (PHD), the persons working for TB control at province level, consisting of at least two persons, are looking at TB control activities in the whole province. One person has the overall responsibility for TB control in the province and is also responsible for medical area and another people is responsible for TB laboratory activities. The responsibilities are to :

- Disseminate policies and guidelines/principles of NTP to all TB network in the province;

- Every two month, regularly supervise operational district (OD) to ensure:
    - Quality DOTS implementation;
    - Sm+ case detection level in accordance with planned target;
    - sufficient anti-TB drugs and reagents; appropriate drug use and keeping;
    - quality improvement of TB laboratory(lab.) activities;
    - proper recording /registration and reporting.

- Organize refreshment courses for TB control in the province;

- Well coordinate with local authority, various organizations and community to enhance TB control activities;

- Review OD request for drugs, reagents and other materials;

- Collect, analyze and evaluate information and send to central level;

- Formulate quarterly and yearly action plans in collaboration with parties concerned and send to CENAT;

- Promote and carry out health education activities for TB control.

C. Operational District Level

Under the responsibility of the chief of Technical Section of the OD, a person is responsible for TB control in the OD and has the following responsibilities:

- Disseminate policies and guidelines/principles of NTP to RH, HCs and community in the OD;

- Every month, regularly supervise referral hospital (RH)and health centers (HCs) with TB activities to ensure:
  - quality DOTS implementation;
  - Sm+ case detection level in accordance with planned target;
  - sufficient anti-TB drugs and reagents; appropriate drug use and keeping;
  - quality improvement of TB lab. activities;
  - proper recording and reporting of cases
  - registering cases of RH and HCs in TB Register including new cases, results of sputum examination and treatment;
  - Estimate requirement for drugs, reagents and other materials in collaboration with the person responsible for OD Pharmacy; timely send request to the MoH Drug Department via the person in charge of provincial TB control;
  - Monthly provide and distribute drugs, reagents and other materials to RH and HCs in collaboration with person responsible for OD Pharmacy;

- Properly register all cases in the entire OD;

- Well coordinate with local authority, various organizations and community to enhance TB control activities;

- Make quarterly report and send to central level through the person in charge of provincial TB control;

- Formulate quarterly and yearly action plans in collaboration with parties concerned;

- Promote and carry out health education activities for TB control.

D. Referral Hospital

TB unit within the RH possessing medical doctor, medical assistant, nurses and lab. Technician, who are the implementers under the responsibility of the RH chief, has the following responsibilities:

- Ensure the TB diagnosis by sputum examination, clinical and other para-clinical means;

- Provide treatment through quality DOT ;

- Regularly perform follow-up sputum examination according to the timelines;

- Properly record all patient under treatment and keep records;

- Make monthly report and timely send to OD;

- Watch anti-TB drug stock; in some cases such as stock interruption contact need to be made urgently to OD;

- Make monthly request for drugs, reagents and other materials to OD;

- Ensure quality laboratory service:
    - sputum collection;
    - sputum examination;
    - keep all examined slides;
    - properly make record;
    - properly maintain the microscope and ensure hygienic laboratory;
    - examine sputum or slides sent from HCs in a timely manner;
- Trace patients with poor compliance and explain and convince them to come back for treatment;
- Take part in TB/HIV/AIDS care and counseling/education.

E. Health Center Level

Staff, under the responsibility of the HC chief, whose part of their job is for TB control activities is responsible for TB control in the catchment's area of the HC and has the following responsibilities:

- Implement and disseminate policies and guidelines/principles of NTP to community;
- Explain to TB suspects with cough more than 21 days to come to HC for detection;
- Identify TB suspects, take sputum, send cups or slides with sputum to TB laboratory;
- Explain and send TB suspects or severe cases to RH;

- Provide anti-TB drugs to patients during intensive and continuation phases as well as collect sputum at month two, five and six and send to RH for follow-up examination**;**

- Properly record all patient under treatment and keep records;

- Make monthly report and timely send to OD;

- Make monthly request for drugs, reagents and other materials to OD;

- Trace patients with poor compliance and explain and convince them to come back for treatment;

- Well coordinate with local authority, various organizations and community to enhance TB control activities;

- Take part in TB/HIV/AIDS care and counseling/education.

- Promote and carry out health education activities for TB control.

F. Community

Community, especially, through HC Management Committee, HC Feed Back committee, volunteer etc., in collaboration with HC staff responsible for TB control, has the following responsibilities:

- Assist in detecting TB suspects and in explaining to them to come to HC or RH for detection and care;

- Assist in tracing patients with poor compliance and explain/convince them to come back for treatment;

- Assist in carrying out health education activities for TB control;

- Contribute to implementing DOT at home.

TB Treatment Regimens for Adults

* Treatment Category 1: 2RHZE / 4RH

This category 1 of treatment is used for treating:

- New smear-positive pulmonary TB
- Severe forms of : Smear-negative pulmonary TB,
  Extra-pulmonary TB (meningitis, miliary, pericarditis, pleural effusion, Bone TB..)
- TB/HIV patients.

Category 1:2RHZE / 4RH

Intensive Phase Take every morning under direct observation (DOT) for 2 months				Continuation Phase Take every morning for 4 months
Weight before Treatment	RH 150mg/75	Z 400	E 400	RH 150/75
30-39 Kg	2	2	1,5	2
40-54 Kg	3	3	2	3
55-69 Kg	4	4	3	4
≥70 Kg	5	5	3,5	5
Dosage per Kg	R=10mg,H= 5mg	Z=25mg	E=15mg	R=10mg,H=5mg

RH :Rifampicin +Isoniazid Z : Pyrazinamid E : Ethambutol

*Treatment Category 2: 2RHZES / 1RHZE / 5RHE

This category 2 of treatment is used for treating:

-Relapse cases
-Failure cases
-Return after default cases
-Others.

Category 2 : 2RHZES / 1RHZE / 5RHE

Intensive Phase Take every morning under direct observation (DOT)								**Continuation Phase Daily administration**	
First and Second Month					**Third Month**			**Month 4 to 8**	
Weight before Treatment	**S 0,75g**	**RH 150 /75**	**Z 400**	**E 400**	**RH 150/75**	**Z 400**	**E 400**	**RH 150 /75**	**E 400**
30-39	0,5g	2	2	1,5	2	2	1,5	2	1,5
40-54	0,75g	3	3	2	3	3	2	3	2
55-69	1g	4	4	3	4	4	3	4	3
≥70	1g	5	5	3,5	5	5	3,5	5	3,5
Dosage per Kg	S = 15mg	R = 10mg, H = 5mg	Z = 25mg	E = 15mg	R = 10mg,H = 5mg	Z = 25mg	E = 15mg	R = 10mg, H =5mg	E = 15mg

RH : Rifampicin + Isoniazid **Z :** Pyrazinamid **E :** Ethambutol
S: Streptomycin
Note: for patients over 45 years, Streptomycin only 750 mg /day

* Treatment Category 3: 2RHZ / 4RH

This category is used for treating:

- smear-negative pulmonary TB, non-severe form.
- extra-pulmonary TB, non-severe form.

Category 3: 2RHZ / 4RH

Intensive Phase Take every morning under direct observation (DOT) for 2 months			**Continuation Phase Take every morning for 4 months**
Weight before Treatment	**RH 150/75mg**	**Z 400mg**	**RH 150/75mg**
30-39 Kg	**2**	**2**	**2**
40-54 Kg	**3**	**3**	**3**
55-69 Kg	**4**	**4**	**4**
≥ 70 Kg	**5**	**5**	**5**
Dosage per Kg	**R=10mg / H=5mg**	**Z=25mg**	**E=10mg / H=5mg**

RH : Rifampicin + Isoniazid **Z :** Pyrazinamid

TB Treatment Regimens for Children

Treatment Category 1: 2RHZE / 4RH

This category 1 of treatment is used for treating children who has:

- New smear-positive pulmonary TB
- Severe forms of : Smear-negative pulmonary TB, Extra-pulmonary TB (meningitis, miliary, pericarditis, pleural effusion, Bone TB..)
- TB/HIV patients.

TB Treatment Regimen for Children under 15
Category 1: 2RHZE / 4RH

Weight before treatment	Intensive Phase 2 Months	Intensive Phase 2 Months	Continuation Phase 4 Months
	RHZ (60mg+30mg+150mg)	E 400mg	RH (60mg+30mg)
7 Kg	1	0	1
8-9 Kg	1,5	0	1,5
10-14 Kg	2	0	2
15-19 Kg	3	0	3
20-24 Kg	4	1	4
25-29 Kg	5	1	5
Dosage per Kg	R:10mg, H:5 mg Z:25 mg	15 mg	R:10 mg, H 5 mg

R : Rifampicin H: Isoniazid **Z :** Pyrazinamid **E :** Ethambutol

* Treatment Category 1:

This category 1 of treatment is used for treating: meningitis TB

TB Treatment Regimen for Children under 15

(Category1: meningitis TB**)**

2RHZS / 4RH

Weight before treatment	Intensive Phase 2 Months	Intensive Phase 2 Months	Continuation Phase 4 Months
	RHZ (60mg+30mg+150mg)	S 750mg	RH (60mg+30mg)
7 Kg	1	100 mg	1
8-9 Kg	1,5	120 mg	1,5
10-14 Kg	2	180 mg	2
15-19 Kg	3	250 mg	3
20-24 Kg	4	330 mg	4
25-29 Kg	5	400 mg	5
Dosage per Kg	R:10mg, H:5 mg Z:25 mg	15 mg	R:10 mg, H 5 mg

R : Rifampicin H: Isoniazid **Z :** Pyrazinamid **S :** Streptomycin

This regimen is for the treatment of meningitis TB

* Treatment Category 3: 2RHZ / 4RH

This category is used for treating:
-smear-negative pulmonary TB, non-severe form.
-extra-pulmonary TB, non-severe form.

TB Treatment Regimen for Children under 15

(Category 3**)**

2RHZ / 4RH

Weight before treatment	**Intensive Phase 2 Months**	**Continuation Phase 4 Months**
	RHZ (60mg+30mg+150mg)	RH (60mg+30mg)
7 Kg	1	1
8-9 Kg	1,5	1,5
10-14 Kg	2	2
15-19 Kg	3	3
20-24 Kg	4	4
25-29 Kg	5	5
Dosage per Kg	R:10 mg,H:5 mg Z:25 mg	R:10 mg ,H:5 mg

NB: R : Rifampicin H: Isoniazid **Z :** Pyrazinamid

Dosage for aduls and chidren are the same

Health Education Pictures

What is Tuberculosis?

- Tuberculosis (TB) is a communicable disease caused by TB microorganism called Bacilli of Koch of " Be Kar (BK) in Cambodian language"

- TB is a dreadful disease, which can cause death and be easily transmissible, if the disease has not been treated or not properly treated.

- TB microorganism may enter your lungs when you breathe within the close proximity of a pulmonary TB patient.

- When TB microorganism have entered your body it may cause lesion in the lungs resulting in TB of the lungs , Pulmonary TB, or it may affect other organs than the lungs causing Extra-pulmonary TB such as lymph notes, kidneys, meninges.

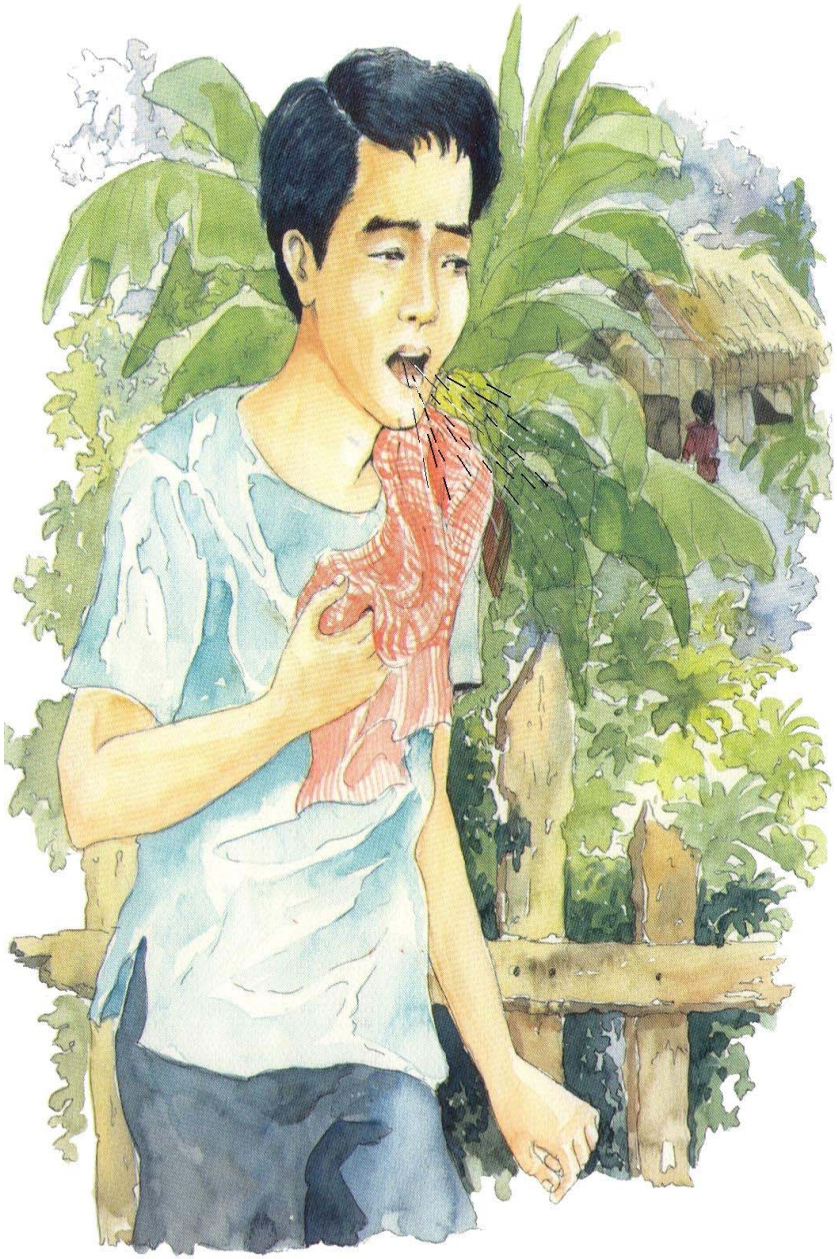
How Do I Know That I Have Tuberculosis?

If you are suspected of having tuberculosis, you should present the following main symptoms:

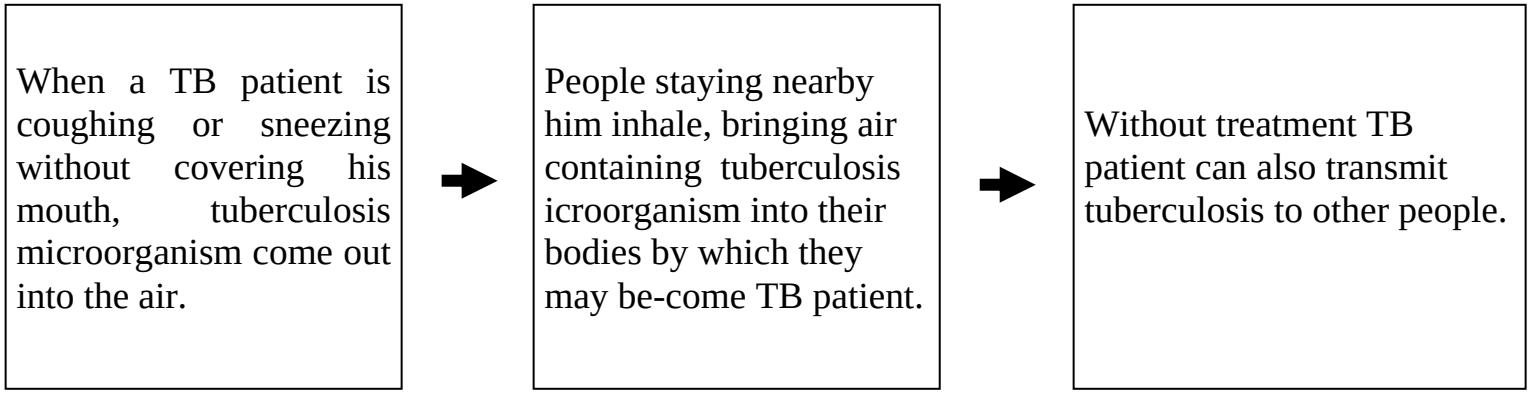
- Prolong cough usually with sputum and sometimes with blood.
- Persistent cough.
- Cough of more than three weeks

You May also be accompanied by other Symptoms:

- Mild fever
- Chest pain
- Breathlessness, shortness of breath
- Night sweats
- Loss of appetite
- Loss of weight



Why do I have TB?



Note:

- Tuberculosis is easily transmissible.
- To prevention the transmission, please cover your mouth and nose with handkerchief or *Krama* when you cough or sneeze.

How do I know whether I Have TB or not?

The only one way of diagnosing pulmonary TB is **sputum smear examination**
For sputum collection, you should follow the following steps:

Patients who can produce sputum should do the following activities:

- Clean the mouth with water (picture no 1)
- Take deep breath three times (picture no 2)
- Cough hard after the third deep breath, then try to cough out sputum from the lung (picture no 3)
- Cough and put sputum into sputum container and cover the container (picture no 4)

Patient who can not produce sputum should do the following activities:

- Take deep breath three times(picture no 2)
- Drink some warm water (picture no 5)
- Sit with the back bent forward and someone help by using a hand slightly and repeatedly hit on the back (picture no 6)
- Cough hard (picture no 3)

Note:

- Two activities (Picture No 3 and 6) are not recommended for patients with blood in the sputum (haemoptysia), for it can aggravate haemoptysia.
- Sputum collection for detecting pulmonary TB is undertaken during two days and three times.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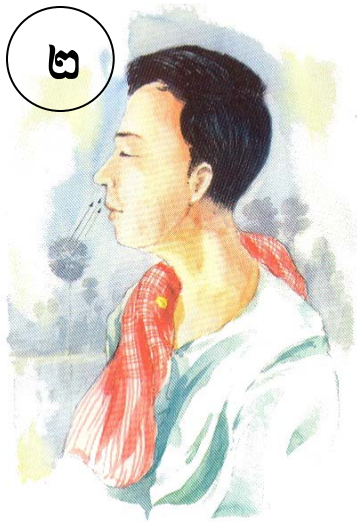
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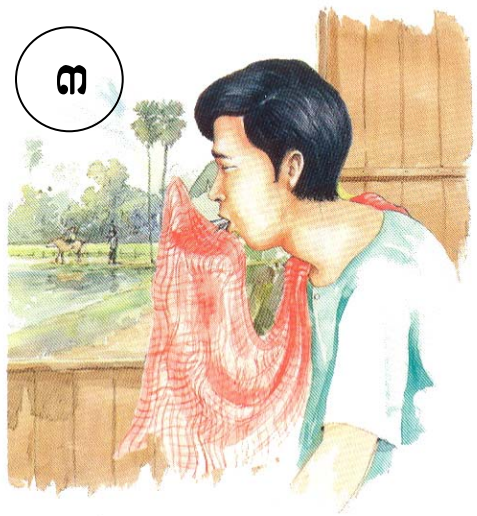
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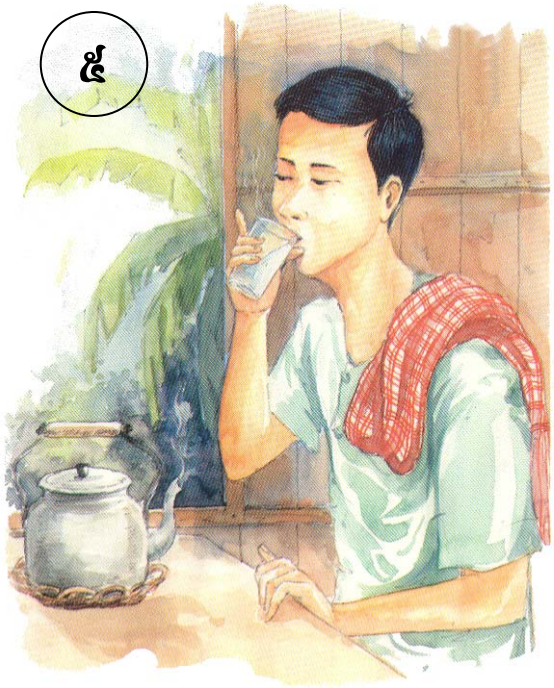
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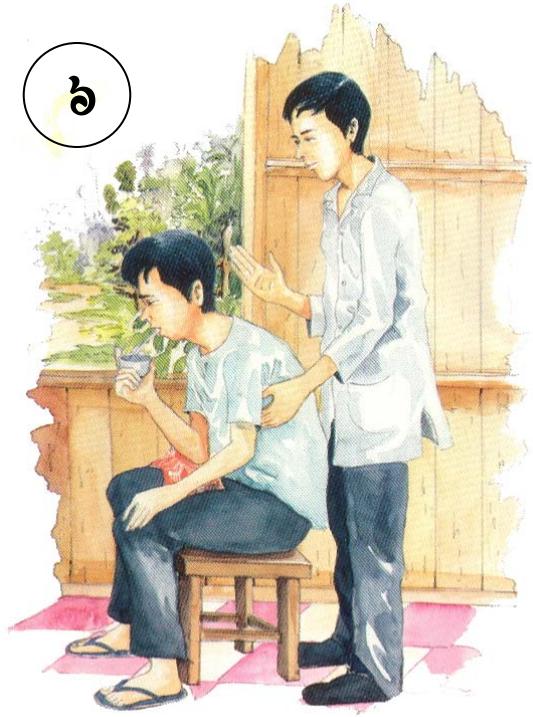
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Can my TB be cured?

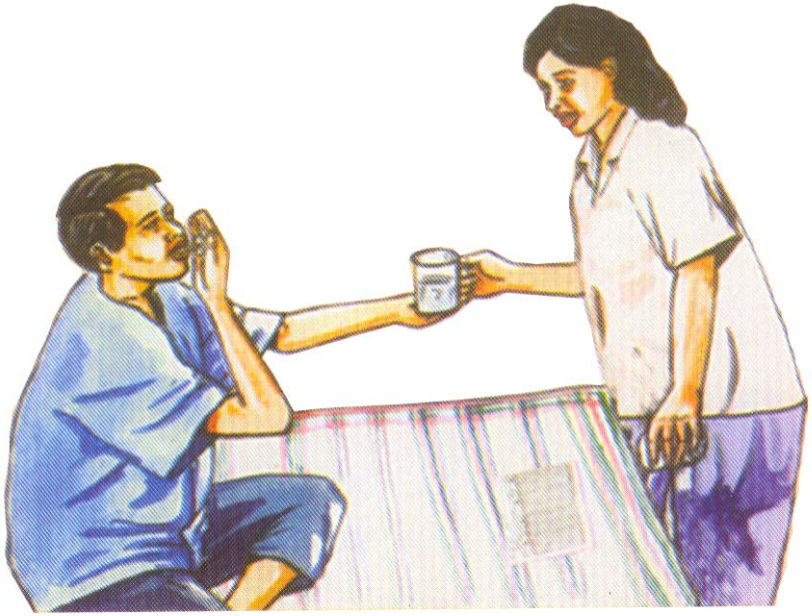
Yes, it is curable. TB is a dreadful disease, but curable. You should take anti-TB drugs every morning till you are cured. At the beginning of the treatment you have to come to the health center to take drugs every morning. Health staff will provide you with medication and check your health condition and help you in case of having drug side effects. You should come to take drugs everyday. TB diagnosis and treatment are free of charge.

During TB treatment what kind of side effects that can take place?

In general, occasionally any drug can have side effects. Likewise, side effects could also occur with anti-TB drugs such as:

- Joint pain
- Nausea
- Skin rash and/or itchy
- Yellowness or redness of urine

You must report to health staff if you have encountered any of the above signs. Health worker can help you if you have those signs. Therefore, it is very important for you to come and take drugs everyday as suggested by health staff.



Care for Health at Home

Nutrition: food and water could help improve your health condition. Some TB patients have loss of appetite. TB treatment does not require any food restriction (except alcohol and cigarette). Patients should take a variety of food such as:

- Fish
- Pork
- Beef
- Chicken
- Duck
- Eggs
- Various vegetables and fruits

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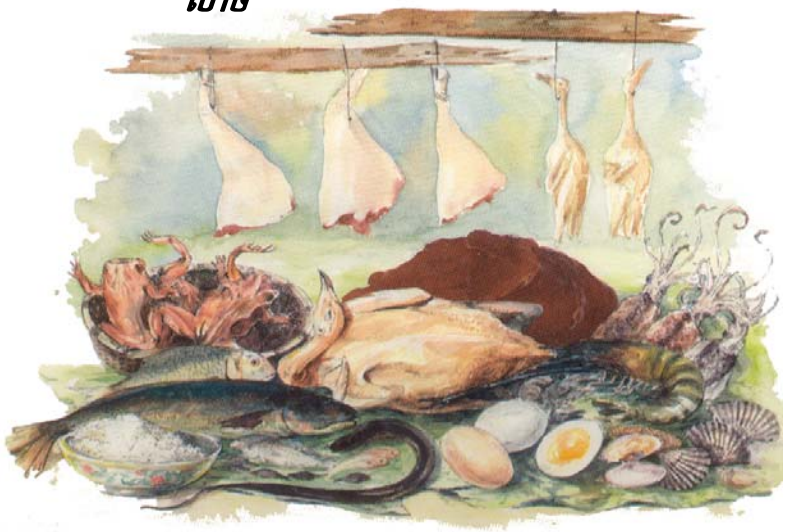
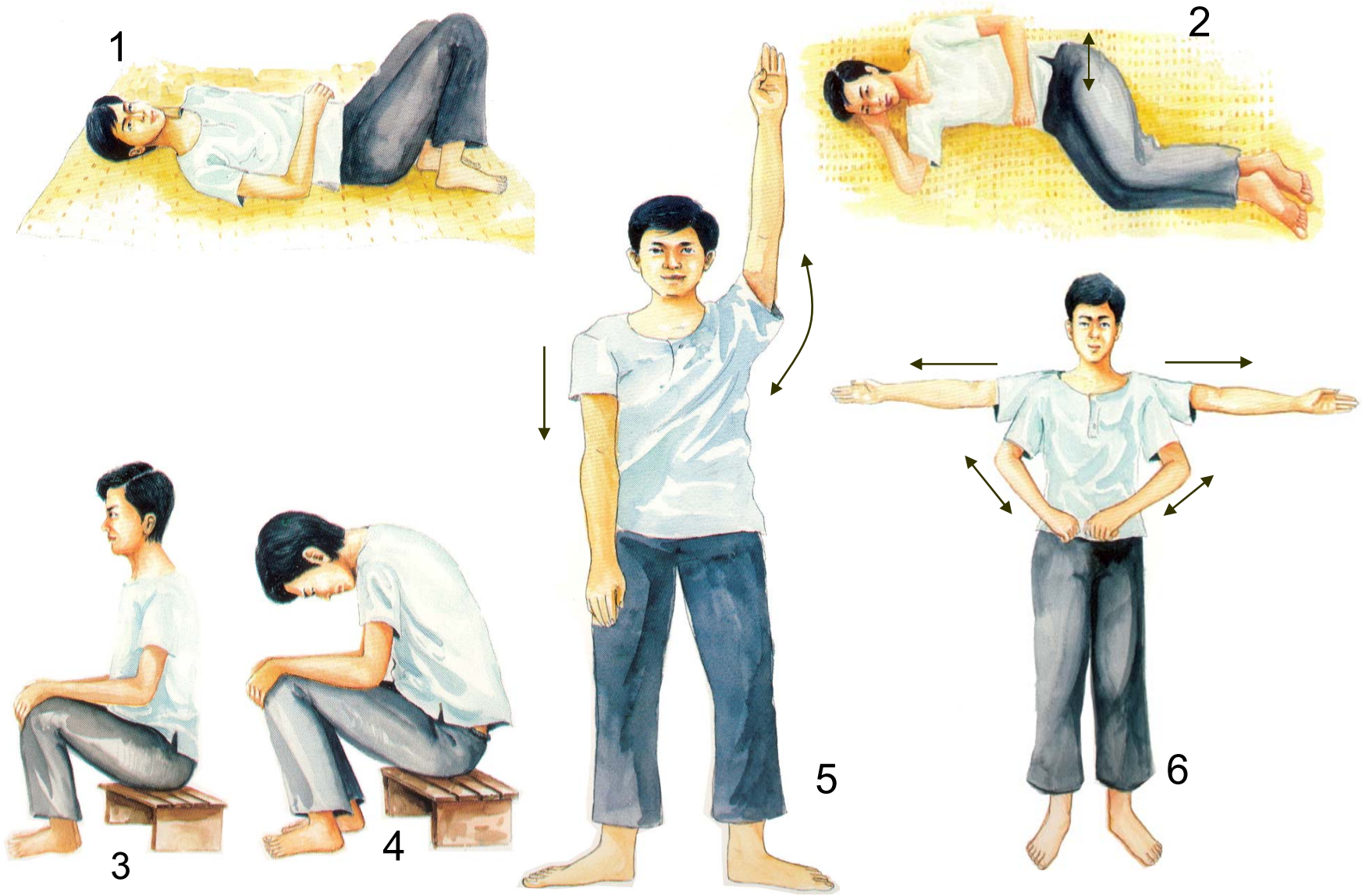


Physical Exercise (help reduce some discomfort/difficulties)

Physical exercise can help reduce some pain, joint pain, make sputum come out of the lungs. When sputum comes out, you (TB patient) can take better breath. Try to do some exercise according to the instruction and pictures as shown:

Picture No 1 In a lying-back-down position, breath in with air full in abdomen, then breath all the air out of the abdomen.	**Picture No 3** In a sitting position, put your arms on the knees, breath in with straight trunk.	**Picture No 5** In a standing position, breath in with air full in abdomen together with one hand up straight; and then breath all the air out together with the hand put down; do the same in turn for left and right hands.
Picture No 2 In a lying-left and right side-down position, breath in with air full in abdomen, then breath all the air out of the abdomen.	**Picture No 4** In a sitting position, put your arms on the knees, breath out with your head and trunk bent towards the knees.	**Picture No 6** In a standing position, both hands up and down together with breathing like in the above.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Preventing Your Families

TB is transmitted from TB patients to other persons when the patients cough or sneeze without covering their mouth. TB microorganisms come out from the patient mouth into the air; then persons staying by the patients inhaled some air and they may become infected. You can prevent your family from TB by covering your mouth when you are coughing or sneezing (it is even better if you could use mask).

Support From Family

TB is curable; and family can support TB patient to help quickly improve the patient illness. Support could be the following:

- Make your house clean.
- Open windows; the sunlight can kill TB microorganisms and fresh air can help improve patient health.
- Heartily support patient to complete treatment
- Patient should meet health worker for care; encourage patient to go and meet health the worker.
- In some case TB patient is quite weak; he or she could go to HC alone; you should help and accompany the patient to the HC.
- To help the patient you should prepare quality food and drinking water and encourage to take food and water.
- Quite often the patient is experiencing some joint discomfort and difficult breathing. You can help by encouraging the patient to do some exercise.
- Discourage patient on smoking and (alcohol) drinking.

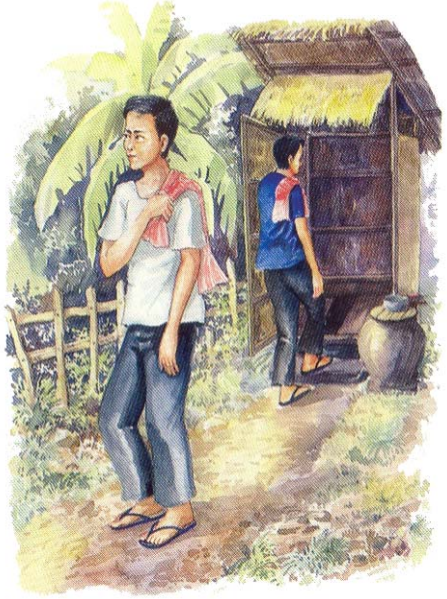
What We Should Know

TB is not a hereditary disease; TB is not transmitted from TB patient to other people through:

- Having meal together and using materials such as dish, spoon, glass
- Sleeping in the same mosquito net
- Using common toilet
- Sexual intercourse
- Food cooked by TB patients

TB can not be caused by:

- Inhaling of air with dust
- Experiencing hard physical work or old age
- Birth delivery



Health education on TB control at community level to community health workers

Community health worker explaining to TB patient on how to record information related to drug taking

Community DOTS Watcher observing TB patient swallowing drugs according to Community DOT treatment approach