

TRAINING MODULE FOR COUNSELLORS ON TB/HIV COORDINATION



Central TB Division & National AIDS Control Organization
New Delhi

August 2005

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Preface

TB is one of the leading infectious causes of death, accounting for over 2 million deaths per year worldwide. Globally, 8.8 million new cases of TB occur every year, of which 1.8 million occur in India. TB control in INDIA is a daunting task for which India is making concerted efforts which are very well appreciated internationally. Globally, the RNTCP is the largest DOTS Programme in terms of patients treated. The programme is demonstrating to the world how effectively the principle of DOTS can be implemented while maintaining the quality.

It is estimated that 40% of the Indian population is infected with Mycobacterium tuberculosis. Considering that above 5.1 million people are infected with HIV in India, an estimated 2 million persons are co-infected with Mycobacterium tuberculosis & HIV.

HIV infected individuals co-infected with TB have an annual risk of 5-15% of developing active TB as compared with 10% lifetime risk in HIV negative. Active TB disease is the commonest opportunistic infection amongst HIV-infected individuals and is also the leading cause of death in PLWHA (People living with HIV/AIDS).

HIV/AIDS poses a major threat to TB Control in India, with a potential to increase the incidence of TB in some parts of the country. The need of the hour is to establish a package of services for TB-HIV that reach out to PLWHA and addresses their needs for TB diagnostic and treatment services.

Though an action plan has been jointly laid down by both the programmes in 2001, effective and optimum implementation of the plan still remains a challenge.

Training of staff is very crucial to the scaling-up of TB/HIV activities. To streamline the training, both the programmes have come up with Modules which address the training needs of various categories of staff. It is envisaged, that uniform, standardised modular training shall be imparted to all the Programme and general health staff through out the country.

I hope this module would act as a useful tool for further expanding the implementation of TB/HIV Coordination activities in the country.

Dr.L.S.Chauhan
Deputy Director General,
Central TB Division

Preface

TB and HIV tend to fuel each other. HIV infection makes an individual more prone to TB. HIV epidemic has the potential to worsen the TB scenario because HIV increases the risk of disease re-activation in people with latent TB infection. The scenario becomes grimmer since these people can further spread TB to other persons.

HIV is the most powerful risk factor for the progression of TB infection to TB disease. This is further substantiated by the fact that an HIV positive person has 50-60% lifetime risk of developing TB disease as compared to an HIV negative person who has a risk of just 10% of developing the TB disease in a lifetime.

In a developing country like India, the potential extra burden of new TB cases attributable to HIV could overwhelm the budgets and support services. Though, a low cost cure exists for TB and is provided through the internationally accepted DOTS strategy, there is no cure for HIV. With ART however, the scourge of HIV can be converted into a chronic manageable illness. ART, by virtue of improving the immunity of PLWHA's, reduces the incidence of opportunistic infections thereby improving the quality of life and reducing the cost on treatment of OI's.

Effective treatment of TB disease can improve the quality of life and prevent transmission of both, TB and HIV in the community. The basic purpose of HIV-TB coordination is to ensure optimal synergy between the two programmes for the prevention and control of both diseases. Key areas include:

1. Commitment to HIV-TB coordination, through sensitisation;
2. Service delivery coordination and cross-referral, through training, provision of additional services, and coordination at the local level;
3. Optimal and comprehensive use of the community reach of both programmes through the sensitisation and involvement of NGOs and private practitioners who are involved in both programmes;
4. Infection control to prevent spread of TB in facilities caring for HIV-infected persons, and to prevent spread of HIV through safe injection practices in the RNTCP;
5. Joint efforts at IEC particularly with regard to de-stigmatisation, TB being treatable; HIV being preventable; DOTS prolongs life of HIV infected persons and ensuring confidentiality of HIV- and TB-related information.
6. Monitoring and evaluation at district, State and National level to assess the co-ordination between both these programmes.

In view of the consideration discussed above, a strategy for TB-HIV Care was considered and a Joint Action Plan for TB-HIV developed in 2001 by the Revised National Tuberculosis Control Programme and the National AIDS Control Programme.

Phase I of the programme which was launched in 2001, the co-ordination was initiated to cover the population residing in the six high HIV prevalence states, namely- Andhra Pradesh, Karnataka, Tamil Nadu, Maharashtra, Nagaland & Manipur. Whereas, in 2003, the Phase II of the co-ordination saw similar activities being extended to eight additional states of moderate HIV prevalence. These states are- Delhi, Gujarat, Himachal Pradesh, Kerala, Orissa, Punjab, Rajasthan and West Bengal.

In order to deliver services properly it becomes imperative that we train the service providers about all the nuances of both the diseases and their managements. Though Training material had been developed earlier, individually by both the National Programmes, yet due to the progressively turbulent dynamics in the arena of HIV-AIDS, reflecting proportionally on the quantum of TB-HIV co-ordination activities, there was a dire need for the technical update/revision of the existing training modules.

To streamline the process of trainings and in order to make it a uniform standard and task specific procedure for the various categories of staff working in both the National programmes, throughout the country, it was proposed to develop common training modules at the Central level, jointly by both the National Programmes.

This training module is one amongst a series of such developed specifically for the purpose of making the health service provider aware of the delicate inter-relation between both the diseases and the devastating impact of their individual or combined effects, which if not treated properly and timely can be lethal.

The module covers all the relevant aspects of both the diseases comprehensively, and will be a valuable guide for the health service provider towards discharging their duties optimally.

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Acknowledgements

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Objectives and methodology of training

LEARNING OBJECTIVES

At the end of the training the counsellor should

- Be able to identify patients with symptoms suggestive of TB amongst clients attending VCTC.
- Be able to refer patients with symptoms suggestive of Tuberculosis to the RNTCP Unit for Investigations and further management.
- Be able to give correct information on TB.
- Be able to clarify the myths and misconceptions related to TB.
- Be able to motivate patients for sputum examinations.
- Be able to motivate patients for completing the treatment.
- Understand how to counsel persons with dual TB/HIV infection.
- Be able to keep a record of patients referred from VCTC to RNTCP Unit.
- Be able to keep a record of diagnosed TB patients attending VCTC.
- Be able to prepare the Line-List.
- Be able to prepare the monthly report of TB/HIV activities.

METHODOLOGY

- Modular Training
- Individual work exercises
- Role plays – Case Studies Discussion
- Field visit

MATERIALS REQUIRED

- Course material
- Blackboard/chalk or White writing board with marker pens or Flip Charts
- Sputum Examination Slip, Consent Form, Counselling register, PID Register, Line List & Monthly Report of TB/HIV activities at VCTC-RNTCP Co-ordination

DURATION

- One day (8 hours)

1. Introduction

A third of the world's population is infected by M. Tuberculosis. In 2000, there were an estimated 8.3 million new cases of TB disease worldwide. The majority of TB cases and deaths are in developing countries and in the economically productive age group (15–50 years).

India has borne the burden of Tuberculosis for innumerable years. Despite the best medicines available for treatment of TB, it is one of the leading causes of mortality and morbidity in the country. A large proportion of the population is infected with Tuberculosis bacillus. Although 40% of the Indian population have TB infection, only a small proportion of them however will develop the disease. The life-time risk is 10% in non-HIV infected persons when the person's immune system is intact. Any condition, in which the immune system is suppressed, like HIV infection, apart from malnutrition, overcrowding and other causes of depressed immunity, predisposes an individual to develop TB disease.

Magnitude of the Tuberculosis Problem

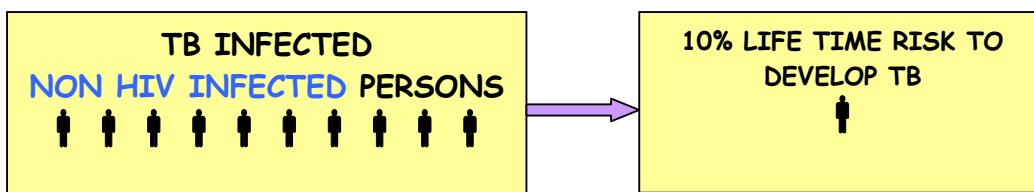
India

- 40% of adults are already infected with the tubercle bacilli;
- India shoulders one-fifth of the global incidence of TB;
- 18 lakh new cases occur every year, of which about 8 lakh are sputum positive TB;
- Nearly 5000 people develop TB disease everyday. More than 3 persons develop TB every minute;
- One untreated sputum positive TB case can infect another 10-15 individuals each year;
- Tuberculosis is the leading infectious cause of death in India;
- It is estimated that about 4 lakh deaths occur due to TB every year in India; more than 1000 deaths/day. (More than 2 every 3 minutes).

TB is one of the earliest opportunistic diseases to develop amongst HIV infected persons. The risk of developing Tuberculosis is higher amongst HIV infected persons as compared to HIV non-infected persons. The higher risk to develop TB disease in HIV positives is only because of decrease in immunity. Amongst the AIDS cases reported so far in India, more than half had developed TB disease. It is estimated by WHO that about 5% of the adult TB cases are HIV positive. In India, an estimated 5.1 million people are infected by the HIV virus and of them over 2 million people are dually infected with both TB and HIV.

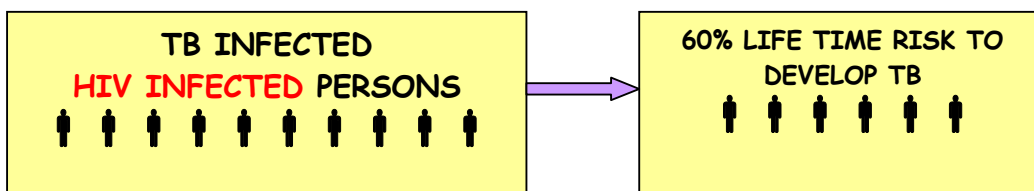
Almost 40% of the Indian population is infected with the TB bacilli, i.e., they have the TB bacilli present in their body. Only few of these persons actually develop TB disease. Following infection with the TB bacilli, the life-time risk of developing TB is 10% in non-

HIV infected persons. This means that a large number of persons do not develop the disease inspite of having TB bacilli in their body.



Impact of HIV on TB

If the person harbouring the TB bacilli is also HIV infected, then there is higher risk of developing TB disease. The life-time risk of developing TB in HIV infected person is around 60%. This means that at least 60% of those who are HIV and TB infected will develop TB disease. The risk of recurrent TB disease is slightly higher in HIV infected persons. Thus with an increase in number of TB cases in People Living with HIV/AIDS (PLWHA), there may be an increase in the risk of transmission of TB to the general community.



An HIV infected person who is newly infected with TB bacilli, is also more likely to develop the TB disease as compared to an HIV negative person.

The rate of progression from infection to disease is also higher; ten to thirty times higher among individuals infected by both TB and HIV as compared to those infected with only TB.

EFFECT OF HIV INFECTION ON TB DISEASE

Risk of developing TB is higher in HIV infected persons. The life-time risk of developing TB disease is around 60% in persons infected with both HIV and TB.

Impact of TB on HIV

In a TB/HIV co-infected person, the immune response to TB bacilli increases HIV replication. As a result of the increase in number of viruses in the body, there is rapid progression of HIV infection and patient starts developing symptoms of various opportunistic infections. Thus the health of the patient who has dual infection deteriorates much more rapidly than with a single infection.

Amongst the AIDS cases, TB is the most common opportunistic disease. The mortality due to TB in AIDS cases is also high.

EFFECT OF TB DISEASE ON HIV INFECTION

**Shortens the life span of patients with HIV infection.
TB disease is a common cause of death in AIDS patients.**

Impact of HIV on TB Control

The principles of TB control are the same even in HIV positive TB patients. Treatment with DOTS (Directly Observed Treatment, Short course) is even more important in HIV positive persons than HIV negative persons as TB is the leading cause of death among PLWHA. Treatment with DOTS improves the quality of life and increases the life span of an HIV infected TB patient. The following consequences are likely to be seen wherever there is high prevalence of HIV and TB:

- Increased load of active TB cases ;
- Increased morbidity and mortality in TB patients due to HIV related opportunistic infections;
- Higher default rates because of adverse drug reactions ;
- Increased risk of TB transmission;
- Increased burden on TB services;
- Delay of access to health services by TB suspects due to the stigma of HIV-AIDS; and
- Increased rates of TB recurrence.

Impact of TB on HIV Programme

- Increased load of active TB cases among PLWHA;
- TB accelerates the progression of HIV related immunosuppression;
- Increased morbidity and mortality from TB among PLWHA;
- Difficulties in diagnosing TB among PLWHA due to atypical clinical presentation of TB disease; and
- Increased burden on HIV services.

Exercise

- 1. What is the percentage of Indian population infected with TB?**
- 2. What are the predisposing factors to develop TB?**
- 3. What is the effect of HIV infection on the status of TB infection/disease?**
- 4. What is the effect of TB disease on the status of HIV infection?**
- 5. What is the effect of HIV on TB Control programme? (at least four effects)**

2. Revised national TB control programme

The Government of India provides free diagnostic and treatment services to all TB patients. Under the Revised National tuberculosis Control Programme (RNTCP), for every one lakh population there is one RNTCP DMC, which not only does sputum examination but also provides treatment for TB. Five such DMCs constitute one Tuberculosis Unit. Each TB Unit is staffed by a Medical Officer (designated from the health facility), a Senior Treatment Supervisor and a Senior TB laboratory Supervisor. The overall responsibility of the TB control programme in the district is with District TB Officer or City TB Officer in case of a Corporation.

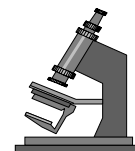
There are five components of the RNTCP programme.

1. Political Commitment



There is a political will to implement the RNTCP. TB is the leading infectious cause of death among adults. It kills more women than all causes associated with childbirth combined and leaves more orphans than any other infectious disease. The Government of India has accorded topmost priority to TB.

2. Quality Sputum Microscopy



The diagnostic test for TB is sputum microscopy.

Designated sputum Microscopy Centres have been established for every one lakh population. These centres are located within the existing health infrastructure. The laboratory technician is intensively trained in sputum examination. Sputum examination is done free of cost at all the Government RNTCP Designated Microscopy Centres.

3. Uninterrupted supply of good quality drugs



Good quality anti-tuberculosis drugs are provided in patient-wise boxes for the entire duration of treatment for each individual patient. The availability of the full course of treatment to a patient is ensured the moment he/she is registered for treatment. Hence in DOTS, the treatment once initiated will never fail for lack of medicine.

4. Directly Observed Treatment



The RNTCP uses the best anti-TB medications available. But unless treatment is made convenient for patients, it will fail. This is why at the heart of the DOTS programme is "directly observed treatment" in which a health worker, or another trained person who is not a family member, watches as the patient swallows the anti-TB medicines in their presence. DOTS is not just "supervised swallowing" of medicines, but a support mechanism, which assists patients to complete their treatment.

5. Accountability

Under RNTCP, the entire responsibility of cure is shifted from the patient to the health care system. The health care system is accountable for each and every patient that has been put on treatment. All efforts are made to ensure that all patients are put on DOTS and all complete their treatment

Implementation of RNTCP

A suspected TB patient is referred to the RNTCP Designated Microscopy Centre by filling in the sputum examination slip. A spot sputum sample is taken and the patients are registered in the TB Laboratory Register. The patient's name and complete address are written in the register. If the patient does not return back the next day, and his first sputum sample is positive, the patient must be followed up and motivated to come for the 2nd and 3rd sputum examination and subsequent treatment. If required, the result of the sputum examination is completed in the sputum examination slip and sent with the patient to the medical officer. If the patient is initially sputum negative, a course of general antibiotics is given for 10-14 days. If patient's symptoms do not subside, a repeat sputum examination is conducted. If the result is negative then, X-ray of the chest is taken. Anti tuberculosis treatment is started if the X-ray chest shows tuberculosis lesions.

In case of Extra-pulmonary TB, the patient is referred for relevant investigations. The investigation reports and the clinical features are taken into consideration before labelling the patient as Extra-pulmonary TB.

The medical officer categories the patient into category I, II or III based on:

- The sputum result
- Type of TB
- Severity of illness
- History of previous treatment.

Based on the patient's area of residence, patients are referred to the nearest Designated Microscopy Centre/DOT centre. A home visit is done to confirm the patient's address. Once the address verification is over and the patient is willing to take DOTS for the required duration, the treatment is started. The patient's treatment card is made. The STS during his visit to the DOTS centre will enter the patient's information in the TB register. Patient is given a unique number, which is mentioned in the treatment card. In the TB register, the full information of a patient is maintained, including the type of TB, sputum examination result and the treatment outcome of the patient. STS is expected to register all the cases started on treatment within a month of initiation of treatment.

These microscopy centres are usually easily accessible to the patient, and the patient can avail of diagnostic and treatment facility under one roof. The patient can also take treatment from any of the identified DOT centres or DOT providers in their locality. Thus it is possible for the patient to receive treatment at a location of his choice and convenience.

REVISED NATIONAL TB CONTROL PROGRAMME

3. Identifying suspected TB cases

TB is caused by a bacterium called as “Mycobacterium Tuberculosis”. Mycobacterium tuberculosis can affect almost any part of the body. Almost 80% of the cases have tuberculosis of the lungs.

Tubercle bacilli are generally present in the sputum of the pulmonary cases. When such patients cough or sneeze, the TB bacilli are released into the air in the form of tiny particles (droplets). A person who inhales these bacteria becomes infected with TB (TB infected) and may subsequently develop the disease.

As mentioned previously a patient whose sputum shows presence of TB bacilli can infect others, if untreated. Thus it is of paramount importance to detect all cases of TB, especially sputum positive cases in the early stages and treat them effectively.

**TB Spreads from an infected person through Droplet infection
– Airborne Infection**

Early Detection and effective treatment can prevent transmission of TB Infection

Types of TB

Tuberculosis can affect any organ of the body. The most common organ affected is the lung. When lung is affected, it is called “Pulmonary TB”. Other organs of the body like the pleura, lymph nodes, bone, meninges, intestine, reproductive system, skin etc can also be affected. When TB occurs in any of the organs other than the lungs, it is called “Extra-pulmonary TB”. Sometimes patients may have both pulmonary and Extra-pulmonary tuberculosis.

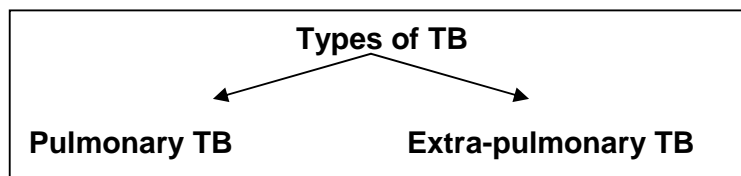
When to Suspect Tuberculosis?

The commonest symptom of Pulmonary Tuberculosis is

- persistent cough for three weeks or more, usually with expectoration
- Other symptoms that can occur are:
- weight loss
- tiredness
- evening rise of temperature
- night sweats
- chest pain
- breathlessness
- loss of appetite
- And coughing of blood.

Persistent Cough for More Than Three Weeks is Likely to be TB

In case of Extra-pulmonary Tuberculosis, depending on the organ affected, the patient will have specific symptoms. Example, Tuberculosis of the lymph nodes presents with swelling of the lymph node. When TB affects the pleura (an outer lining of the lungs), there is fluid collection between the lung and pleura. Such patients present with breathlessness and the severity varies depending on the amount of fluid present. Tuberculosis of the joints presents with swelling and pain of the affected joints, meningeal tuberculosis (TB affecting the brain) presents with headache, fever, neck stiffness and mental confusion.



Extra-pulmonary TB is more common amongst HIV infected persons with advanced immune suppression. Amongst Extra-pulmonary TB, TB lymphadenitis (lymph node swelling), pleural effusion (collection of fluid between lung and its outer covering), pericardial disease (layer surrounding the heart is affected), miliary TB (numerous TB lesions in the lungs) and meningeal TB (Brain TB) are commonest.

A Counsellor should refer clients presenting with symptoms suggestive of TB disease to the nearest RNTCP Designated Microscopy Centre

IDENTIFYING SUSPECTED TB CASES

Exercise

1. **What is the mode of spread for TB?**
2. **What are the types of TB?**
3. **How will you identify a suspected pulmonary TB case?**
4. **What are the general symptoms of TB?**
5. **Do you think you can identify a person with Extra-pulmonary TB? If yes which Extra-pulmonary TB patient is most likely to be identified by you?**
6. **Where will you refer persons with symptoms of TB?**

EXERCISE

Identify suspected TB cases (Pulmonary and Extra-pulmonary) amongst the following VCTC clients so that you can refer them to Designated Microscopy Centre.

New Clients

1. Azhar Mohammad, 35 year old. (date of visit is 1-2-03)
2. Raju Verma, 16 year old male, residing at Sarathi House, Room no 43, Samant Road complains of a swelling in the left region of the neck. (date of visit is 1-2-03)
3. Govindlal Kumar, 34 year old male. No complaints. (date of visit is 3-2-03)
4. Farah 18 year old pregnant women. (date of visit is 3-2-03)
5. Lakshmi Reddy, 35 year old is having a cough since many months. She had taken treatment for tuberculosis 2 years back. She resides at Room no. 34, Basant Colony, Sarojini Road. (date of visit is 5-2-03)
6. Ayesha Khan, 23 year old student. (date of visit is 6-2-03)
7. Chand Kumar, 21 year old college student. (date of visit is 6-2-03)
8. Gorakhnath, 18 year old complaining of cough since three months. He has been referred from District TB Centre to VCTC for HIV testing. (date of visit is 9-2-03)
9. Arvind Raje, 35 year old male complains of swellings in the neck. He is having fever and cough since a week. He is residing at House no. 4-3-304 Amrit Nagar. (date of visit is 10-2-03)
10. Ganesh Lal, 45 year old male has come for HIV testing. He has no complaints. (date of visit is 12-2-03)

Follow Up Clients

1. Sabina Sherkhan, 24 year old, HIV positive. (PID no. MA-03-0227) (date of visit is 10-2-03)
2. Ganesh Deewar, 35 year old, HIV positive complains of cough since two months. He resides at Sarathi Nagar, House no. 3-33-2234. (PID no. MA-03-0135)
3. (date of visit is 15-2-03)
4. Kiran, 30 years old HIV positive. (PID no. MA-02-1342) (date of visit is 26-2-03)

IDENTIFYING SUSPECTED TB CASES

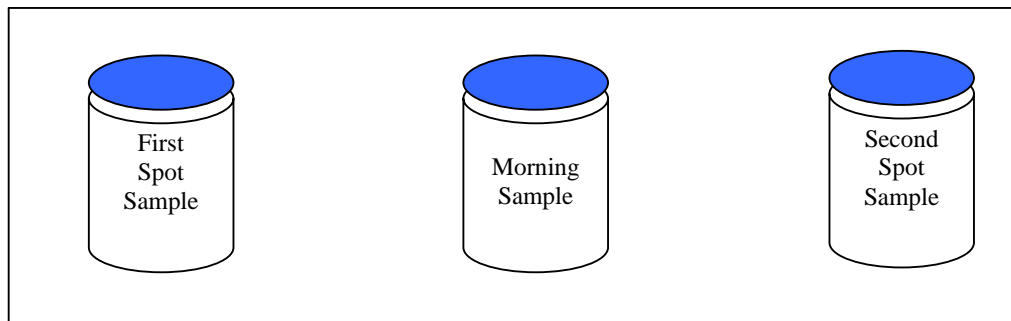
4. Diagnosis of TB

A) Investigations for Pulmonary TB

Sputum Examination

Most tuberculosis patients present with chest symptoms. Invariably these patients seek medical care. That means the majority of TB patients can be easily detected by asking whether they have symptoms of TB. If any person has symptoms suggestive of TB, especially cough of more than three weeks, they should be referred for laboratory tests. The laboratory test for diagnosing TB is sputum examination.

It is essential to examine three sputum specimens of a single patient before a conclusive diagnosis can be made. One sputum sample is not sufficient for diagnosis of TB disease. Three sputum samples should be tested for diagnosis of sputum positive TB.



A spot specimen is collected on the patient's first visit. The patient is given a sputum container to bring the early morning sample the next day. When the patient comes with the early morning sample, the second spot specimen is taken. Sputum is examined using the Ziehl Neelson technique. Result of sputum examination is given to the patient at the earliest.

Those persons whose sputum shows the presence of TB bacilli are called as sputum positive pulmonary TB. If the sputum does not show TB bacilli the patient is given a course antibiotic for 10-14 days. If patient's symptoms do not subside the smear examination is repeated. If the smear is negative the patient is further examined by doing an X-ray Chest. If X-ray shows TB lesions, the patient is called as sputum negative TB.

Thus Pulmonary TB can be of two types: Sputum positive pulmonary TB and sputum negative pulmonary TB.

During the course of treatment, patients are subjected to repeat sputum examinations to monitor their response to treatment and status of infectivity. Thus sputum examination not only confirms the diagnosis, but also indicates the degree of infectivity and the response of the patient to treatment.

Under RNTCP sputum examination is done ONLY in RNTCP Designated microscopy centres (DMC). For every one lakh population, there is one RNTCP DMC. These microscopy centres are located in existing government hospitals, Medical colleges, PHCs, NGO Clinics or Private Health Care facilities. They have a skilled laboratory technician, trained intensively for a sputum examination. Sputum examination is done free of cost at all the government health centres.

X-Ray Chest

X-rays are difficult to interpret. There is high chance of wrongly diagnosing a patient as tuberculosis if X-ray alone is used for diagnosis. A very large proportion of patients with an abnormal X-ray suggestive of tuberculosis, do not actually have the disease. In fact only 50% of those having X-ray findings suggestive of tuberculosis may actually have the disease. Thus if only X-rays are used, over diagnosis of tuberculosis will occur. Patients will unnecessarily receive drugs, which could have been better utilized for needy patients.

Nevertheless X-ray Chest is an important tool for diagnosis in certain cases of TB. When a sputum negative patient does not respond to treatment with 10-14 days of general antibiotics, an X-ray Chest may be required for diagnosis of TB. In cases of Extra-pulmonary TB, like pleural effusion and miliary TB, X-ray chest is required for diagnosis

B) Investigations for Extra-Pulmonary TB

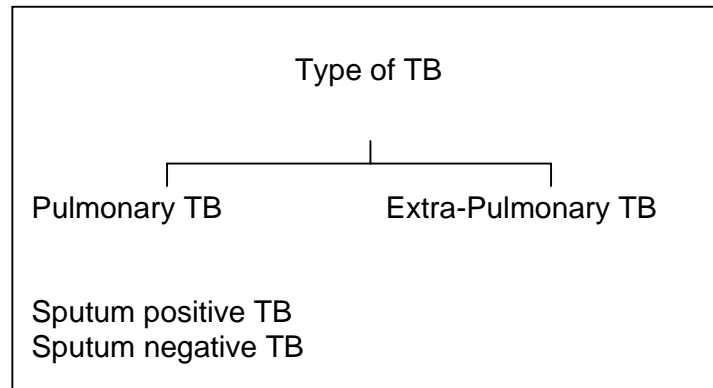
The investigation of Extra-pulmonary TB depends on the organ affected. It may not be easy for the VCTC counsellor to suspect Extra-pulmonary TB. However, any client with lymph node swellings can be detected by the VCTC Counsellor or those with symptoms suggestive of EP TB, and should be referred to the physician.

C) HIV Infected Person

Patients with HIV have frequent pulmonary infections. Each time such an infection occurs, the patient must be evaluated for TB disease. It is general tendency of the patient to insist on X-ray for diagnosis of TB. Some of the patient will express reluctance or unwillingness to have a sputum examination. The counsellor therefore requires ensuring that the patients are motivated for sputum examination. The role of X-ray is secondary and all patients presenting with cough need to undergo sputum examination first. If sputum examination is negative, and a course of antibiotic also has failed to relieve the symptoms, the patient is subjected to repeat sputum examination and possibly an X-ray Chest after a repeat sputum examination. The doctor will then decide whether the patient is a case of TB or not.

D) Follow up Sputum Examination

During the course of treatment, follow up sputum examination is done every two months till the end of treatment.



E) Examination of Contacts of Sputum Positive TB Patients

The following contacts of sputum positive TB patient should be examined:

1. Any contact of sputum positive person who has a productive cough should have three sputum examinations done, irrespective of the duration of his symptoms.
2. All children below six years of age who are contacts of sputum positive cases should be examined for TB disease. If the child has TB disease, then anti-tuberculosis treatment is given. If the child does not have TB, preventive treatment with Isoniazid is given for 6 months, to prevent TB.

5. Treatment of TB

A Tuberculosis patient will receive treatment for six to eight months depending on the type of tuberculosis, sputum status, severity of illness and history of previous treatment.

There are three treatment categories for TB patients. Patients are classified into one of these categories. The drugs are available in patient wise boxes containing the full course of treatment for the individual patient. Each box contains two pouches – one for the intensive phase and the other for the continuation phase. The drugs in the two pouches are packed in blister packs. The boxes for each of the three categories have different coloured labels.

Intensive Phase: The duration of this phase is two months for Category I and III, and three months for Category II. The drugs in intensive phase are to be taken on alternate days. One blister pack in the intensive phase contains all the drugs for a single day. The patient consumes all the doses of Intensive phase under supervision. The phase is prolonged by one month if the patient is still sputum smear positive at the end of the phase.

Continuation Phase: The duration of this phase is four months for category I and III and five months for Category II. The blister pack for the continuation phase contains drugs for a week. The anti-tuberculosis drugs are to be taken on three days a week and on other days a single tablet of Vitamin B is taken. The patient visits, the DOTS centre/ DOTS provider once a week and consumes first dose under supervision and consumes rest of the doses at home. On the next visit in the subsequent week the patient brings back the empty blister pack.

Treatment for TB is available at all the government health care facilities free of cost.

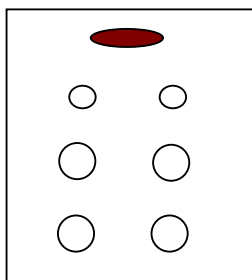
Category One

Type of TB patient

- New sputum positive Pulmonary TB
- New sputum negative seriously ill Pulmonary TB
- New seriously ill Extra-pulmonary TB

Regimen

Intensive Phase: Two months of four different oral drugs (Total 7 tablets in a single blister pack).



BLISTER PACK OF INTENSIVE PHASE CONTAINING

Cap. Rifampicin (One capsule)

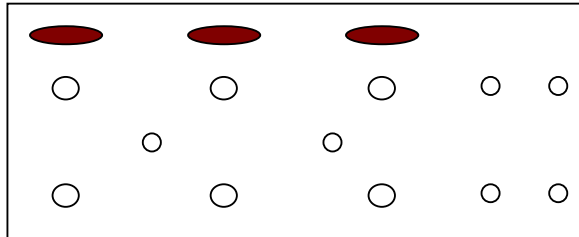
Tab. Isoniazid (Two tablets)

Tab. Ethambutol (Two tablets)

Tab. Pyrazinamide (Two Tablets)

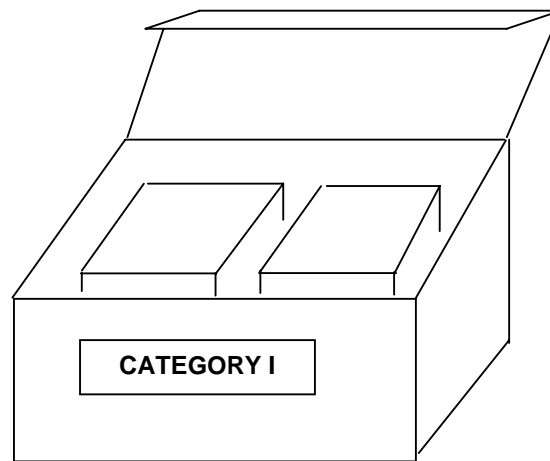
24 BLISTER PACKS IN the INTENSIVE PHASE

Continuation Phase: Four months of two different oral drugs (Total 3 tablets/day). Antituberculosis drugs are consumed on alternate days for three days in a week. On the remaining days, Vitamin B6-Pyridoxine, a single tablet is consumed.



BLISTER PACK OF CONTINUATION PHASE CONTAINING
Cap. Rifampicin (1 cap/day)
Tab. Isoniazide (2 tabs/day)
Tab. Vitamin B6 (1 tab/day)
18 WEEKLY BLISTERS IN CONTINUATION PHASE

Treatment box



Category Two

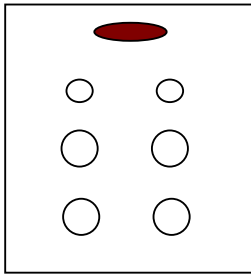
Type of TB patient

- Sputum positive Relapse
- Sputum positive treatment failure
- Sputum positive Treatment after default
- Others

Regimen

Intensive Phase: Initial two months of four different oral drugs (Total 7 tablets in a single blister pack) and injection Streptomycin. Then another one month of the four oral drugs.

TREATMENT OF TB



BLISTER PACK OF INTENSIVE PHASE CONTAINING

Cap. Rifampicin (One capsule)

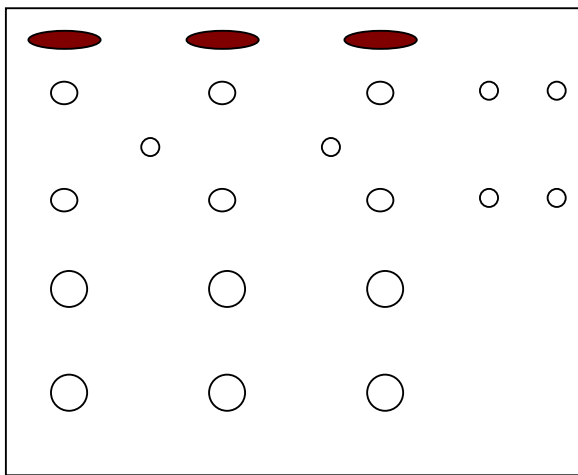
Tab. Isoniazid (Two tablets)

Tab. Ethambutol (Two tablets)

Tab. Pyrazinamide (Two Tablets)

36 BLISTER PACKS IN INTENSIVE PHASE +

Continuation Phase: Five months of three different oral drugs (Total 5 tablets). Anti-tuberculosis medicines are consumed on three days of the week. On the remaining days, a single tablet of Vitamin B6-Pyridoxine is consumed.



BLISTER PACK OF CONTINUATION PHASE CONTAINING

Cap. Rifampicin (1 cap/day.)

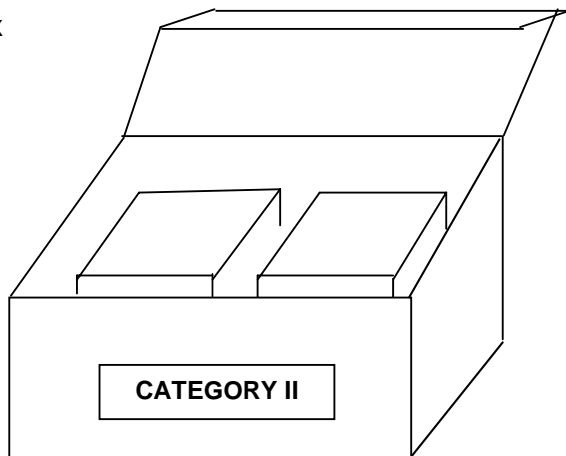
Tab. Isoniazid (2 tabs/day)

Tab. Ethambutol (2 tabs/day)

Tab Vitamin B6 (1 tab/day)

22 WEEKLY BLISTER PACKS IN CONTINUATION PHASE

Treatment box



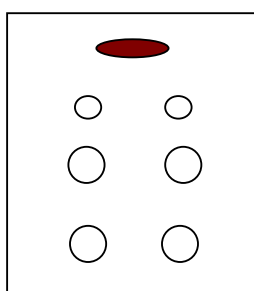
Category Three

Type of TB patient

- New Sputum negative not seriously ill Pulmonary TB
- New not seriously ill Extra-pulmonary TB

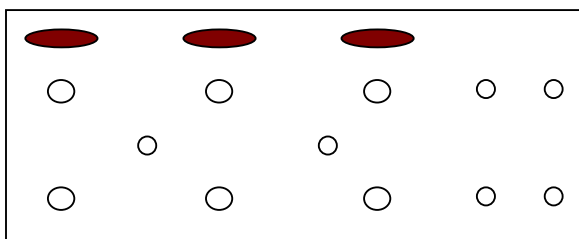
Regimen

Intensive Phase: Two months of three different oral drugs (Total 7 tablets in a single blister pack).



BLISTER PACK OF INTENSIVE PHASE CONTAINING
Cap. Rifampicin (One capsule)
Tab. Isoniazid (Two tablets)
Tab. Pyrazinamide (Two Tablets)
24 BLISTER PACKS IN INTENSIVE PHASE

Continuation Phase: Four months of two different oral drugs (Total 3 tablets). Anti-tuberculosis medicines are consumed three times a week. The remaining days, a single tablet of Vitamin B6-Pyridoxine is consumed.



BLISTER PACK OF CONTINUATION PHASE CONTAINING
Cap. Rifampicin (1cap/day)
Tab. Isoniazid (2 tabs/day)
Tab. Vitamin B6 (1 tab/day)
18 WEEKLY BLISTER PACKS IN CONTINUATION PHASE

Treatment box

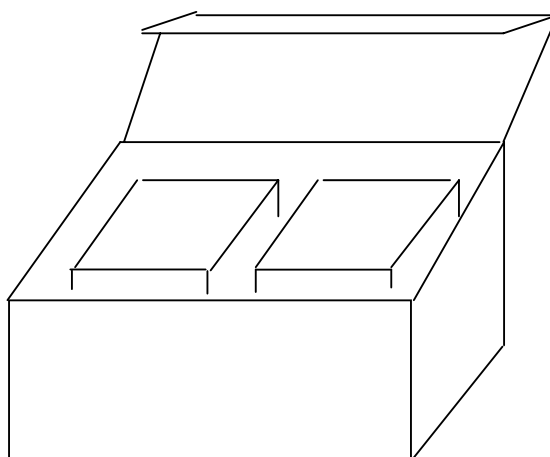


Table Showing Summary of Treatment Regimens

Category of Treatment	Type of Patient	Regimen*
Category I	New sputum smear-positive Seriously ill new sputum smear-negative** Seriously ill new extra-pulmonary**	2H ₃ R ₃ Z ₃ E ₃ + 4H ₃ R ₃
Category II	Sputum smear-positive Relapse Sputum smear-positive Failure Sputum smear-positive Treatment After Default Others***	2H ₃ R ₃ Z ₃ E ₃ S ₃ + 1H ₃ R ₃ Z ₃ E ₃ + 5H ₃ R ₃ E ₃
Category III	New Sputum smear-negative, not seriously ill New Extra-pulmonary, not seriously ill	2H ₃ R ₃ Z ₃ + 4H ₃ R ₃

*The number before the letters refers to the number of months of treatment. The subscript after the letters refers to the number of doses per week. The dosage strengths are as follows: H: Isoniazid (600 mg), R: Rifampicin (450 mg), Z: Pyrazinamide (1500 mg), E: Ethambutol (1200 mg), S: Streptomycin (750 mg). Patients who weigh 60 kg or more receive additional Rifampicin 150 mg. Patients who are more than 50 years old receive streptomycin 500 mg. Patients who weigh less than 30 kg, receive drugs as per body weight. Patients in Categories I and II who have a positive sputum smear at the end of the initial intensive phase receive an additional month of intensive phase treatment.

** Seriously ill also includes, any patient, pulmonary or extra-pulmonary who is HIV positive and declares his sero-status to the categorizing/ treating medical officer. For the purpose of categorization, HIV testing should not be done

*** In rare and exceptional cases, patients who are sputum smear-negative or who have extra-pulmonary disease can have Relapse or Failure. This diagnosis in all such cases should always be made by an MO and should be supported by culture or histological evidence of current, active TB. In these cases, the patient should be categorized as 'Others' and given Category II treatment.

Side-Effects to Anti-Tuberculosis Drugs

Patients may experience some side-effects to these anti-tuberculosis drugs. These side-effects may be classified as minor or severe.

Minor Side-Effects:

Gastrointestinal upset, red/orange coloured urine/tears, and drowsiness are common side-effects.

Severe Side-Effects:

Burning sensation in the hands and feet, joint pains, impaired vision, ringing in the ears, loss of hearing, dizziness, loss of balance or jaundice requires to be immediately reported to the medical officer for evaluation.

Patients who develop side-effects tend to discontinue the medicines on their own, without bothering to consult the doctor. Patients should be encouraged to seek medical opinion in case of side-effects and should not on their own stop medicines.

EXERCISE

1. **Duration of treatment for Category One is _____**

2. **Duration of treatment for Category Two is _____**

3. **Duration of treatment for Category Three is _____**

4. **What should the patient do in case he develops side-effects?**

6. Directly observed treatment short course, DOTS

Directly Observed Treatment Short course, (DOTS) is the internationally recommended strategy to ensure cure by providing the effective medicines and confirming that they are taken. A health worker or a trained observer (DOT provider), watches and helps the patient to swallow the tablets. By direct observation, it is ensured that the TB patient receives the right drugs, in the right doses and at the right intervals.

Direct observation is necessary because it has been seen that most patients do not strictly adhere to the treatment regimen. Most patients discontinue their medication once they start feeling better. Even with excellent health education, at least one third of the patients are likely to stop taking their drugs as prescribed.

The DOT Provider watches the patient take his/her medicines, during the entire duration of Intensive Phase. The patient has to make a total of 24 visits for category I and III; and 36 visits for category II. If a patient does not come on the expected day, a home visit is done the next day to immediately retrieve the patient. In the continuation phase, the patient comes every week and collects the weekly blister pack from the DOT provider. On the day of his/her visit, the patient in the presence of the DOT provider swallows the first dose for that week. The consumption of the medicines in the continuation phase is checked by the return of empty blister packs, when the patients come subsequently in the next week.

DOTS in the context of HIV

DOTS:

- Prolongs and improves quality of life. The average life span is increased.
- Stops the spread of TB.
- Decreases the chances of relapse
- Increases the survival rate for HIV positive TB patients
- Decreases the death rate in HIV positive TB patients

Failure to use DOTS in the face of HIV can lead to explosive spread of TB with cases and drug resistance increasing rapidly.

7. Psychosocial aspects of HIV and TB

Psychological aspects of HIV

People with diagnosed HIV infection and HIV related illness including AIDS, and those close to them are confronted by many different problems. All of them require emotional support. Anxiety about having spread infection, physical isolation, hospitalization, discrimination within the community or family, loss of housing, interruption of education, financial problems, the physical effects of illness, disease progression, loss of relationships, bereavement, anger, loneliness and depression are some of the concerns that need to be address

On being diagnosed HIV positive different people give varied responses. Most people are frightened of HIV-AIDS. Some feel shocked. Some feel angry. The feelings of HIV-AIDS patient vary and change often. One day they may feel rejected and lonely. The next day they may feel hopeful. This is normal. Mentioned below are some of the feelings of HIV positives.

Shock: No matter how much you counsel it is shock to learn that they have HIV/AIDS. They may feel confused and not know what to do?

Denial: At first, some people cannot believe that they have HIV/AIDS. They react saying: "The doctor must be wrong", "It can't be true. There must be some mistake". Many of them will get the blood tested at different centres in the hope of getting HIV negative report.

Anger: Some people get very angry when they find out they have HIV or AIDS. They blame themselves or the person they think gave them the HIV infection. Some may even blame God.

Revengeful: Some people want to take revenge when they find out that they have HIV/AIDS. They want to infect other people.

Bargaining: Some people try to bargain. They think: "God will cure me if I stop having sex". "I will do a pooja, God will cure me"

Loneliness: People with HIV often feel lonely.

Fear: People with HIV fear losing their jobs, other people knowing their HIV status, discrimination, death etc.

Self-consciousness: Some people with HIV-AIDS think everyone is looking at them or talking about them. This makes them want to hide. Sometimes they feel rejected by others or they reject themselves. They are often feeling guilty.

Depression: They feel useless. They feel there is no good reason to live. They isolate themselves from others, stay at home, stop eating, and do not talk to others.

Acceptance: After sometime most people with HIV-AIDS, accept their situation. This is helpful. They often feel more serene. They are able to plan the best way to lead their life or plan for future.

Hope: Being hopeful lifts one's spirits and gives them strength to face each situation. Hope can help a person to fight HIV and AIDS and live longer. Hope to live long time, of cure being found, of treatment being made available etc.

Social Aspects of HIV

HIV/AIDS has immense stigma attached. There is great fear of contracting HIV and therefore people isolate the HIV positives. There are many instances of the entire families of HIV positive being isolated by the villages, people been thrown out of the jobs, asked to vacate the houses etc. Spouse's and family have deserted HIV positive women even when she has contracted the infection from her husband. Health care providers have hurriedly discharged patients on one pretext or the other as soon as they found out the HIV status. Widespread HIV testing of patients is being done prior to surgery, for the protection of the health care provider, which is unnecessary.

As the most common mode of spread is Sexual Intercourse with an infected person, all HIV positives are looked at suspiciously. Each and every HIV infected person is thought to have multiple sex partners and considered to be immoral. It is especially more distressing for women who has contracted the infection from the faithful relationship with her husband. There are few people who have contracted the HIV infection through transfusion of infected blood, but nobody believes them and are looked down upon as a person with loose character.

HIV positive children are not given admissions in school, isolated in the class. Children of HIV infected parents are not cared for by other family members after the death of parents.

HIV positives are being exploited by many dubious people proclaiming to have cure for HIV. People have incurred huge debts to buy antiretroviral drugs and other drugs supposedly effective in curing HIV.

Psychosocial Aspects of TB

Like HIV, TB is also a disease with stigma, but to a much lesser extent. Widely held and usually mistaken beliefs about what causes TB, how it is transmitted, whether it can be cured are linked to stigmatization and discrimination against people with Tuberculosis.

Many patients believe that TB is a hereditary disease. It is also thought that TB is transmitted by eating together, sharing plates and utensils, using TB patient's clothes, sharing bathroom with TB patient etc. It is also thought that smoking, drinking or those who are exposed to dust, tobacco are likely to develop TB.

In spite of awareness about TB, patients are afraid to seek medical opinion for fear of being diagnosed as TB. Thereby many persons prolong their sufferings and many unwilling to accept the diagnosis of TB shop around for another doctor in the hope of a more acceptable diagnosis.

TB can occur to any person, but conditions like poverty, malnutrition and overcrowding etc predisposes an individual to develop TB. In the early stages, patients tend to ignore their symptoms and will go to physician only when they are seriously ill. The patients generally seek private treatment. Most of the patients are unable to afford complete

treatment from the private facility. Many patients and their families incur huge debts, are forced to sell off their assets and are pushed further into poverty. If the sole bread earner of the family is suffering from TB, the situation may be further complicated by loss of daily wages if he is unable to attend to his work.

Patients tend to discontinue their treatment as their health improves, within few months of treatment. The motivation to take regular medication for a long period is lacking even when medicines are provided free of cost. Patient starts forgetting to take medicines. Alternatively, takes less than the prescribed medicines or decides that he does not require any more treatment. Many a time inspite of knowing the consequences of stopping the treatment, patient stops the treatment.

Women TB patients face special difficulties, whether married or unmarried. Married women with TB tend to neglect their illness in favour of household responsibilities. They will not be allowed to take rest. Women tend to delay going to the physician until they are too ill to do their work. They are financially dependant on husbands and therefore cannot seek health care services. Sometimes due to illiteracy and restricted freedom of movement to women, the women are totally dependent on the male members of the family to accompany them to the health care services. In addition, there is also the fear that she may be thrown out of the house by her husband or his family members. Women are separated from the children for the fear of infecting the children. Unmarried girls with TB fear that they might never find a spouse. Therefore, the girls are made to suffer in silence by parents. The chances of finding a good marriage partner for a person if any of his family members suffered from TB is poor.

Children may be taken out of school because there is no money for uniforms or school fees or because they must begin to work to help/support the family.

Understanding that TB is curable; not a hereditary disease; and after a short period of treatment, no longer infectious can reduce the stigma attached to TB; increase acceptance of people with TB; and create a supportive environment to encourage diagnosis, treatment and effective cure.

8. Counselling TB/HIV patient

VCTC can serve as an entry point for TB care. Clients visiting VCTC may be having symptoms suggestive of TB disease, and the early identification and referral of these persons will ensure early detection and prompt initiation of treatment. Treating TB amongst HIV positives considerably improves their quality of life and life span. It is possible for the counsellors to identify suspected TB cases amongst the clients attending VCTC. Once identified the Counsellor should refer the client to the nearest Designated Microscopy centre depending on the patient's convenience. Also all the clients should be imparted information on TB irrespective of their HIV status. This will help in ensuring that if the person develops symptoms of TB anytime in future, he will promptly seek medical opinion.

A patient receiving treatment for TB may be suspected to have HIV infection because of symptoms of other opportunistic infections or history of exposure. Such patients are likely to be referred to the VCTC for HIV testing. These patients need to undergo pre-test counselling and an informed consent should be taken before subjecting the patient for HIV test. Confidentiality of the patient should be ensured at all-times and post-test counselling should be undertaken irrespective of the HIV status.

Asking for history suggestive of TB amongst VCTC Clients

The Clients who attend the VCTC may have symptoms suggestive of TB disease. As the purpose of the visit to VCTC is HIV testing, the client may not think it is important to tell about any symptoms that he may be suffering from. It is therefore necessary that the Counsellors ask directly whether the patient has any symptoms. These symptoms may be related to STD, Gastro-intestinal infection, Oral thrush, TB and other Opportunistic infections. The patient will then require to be referred to the physician.

TB being most common amongst HIV infected, it is crucial for the Counsellor to screen their clients for TB and refer symptomatics to the nearest Designated Microscopy Centre.

Imparting Information on HIV and TB to VCTC Clients

All the clients attending VCTC irrespective of whether they have symptoms of TB or not, should be given information on basic facts of TB. Better equipped with information on TB, the client will promptly seek medical opinion, in case of symptoms. The following points need to be told to all VCTC clients.

Information on HIV

1. What are HIV and AIDS?
2. What is the difference between HIV and AIDS
3. Routes of transmission for HIV.
4. Diagnosis of HIV infection.

5. Signs and Symptoms of HIV
6. Preventive measures for HIV-AIDS
7. Myths and Misconceptions

Information on TB

1. Mode of spread for TB
2. Cough for three weeks or more could be Tuberculosis.
3. General symptoms of TB are low grade fever in the evening, weight loss, loss of appetite. Other symptoms of TB are chest pain, breathlessness, coughing of blood.
4. TB is a completely curable disease
5. For diagnosis of pulmonary Tuberculosis, sputum examination is the diagnostic test.
6. Three sputum samples should be examined for diagnosis.
7. Sputum examination is done free of cost at the designated RNTCP microscopy centres.
8. Treatment for TB is given for duration of 6-8 months.
9. TB treatment is available free of cost at all the government health facility
10. Treatment should be taken regularly and completely under direct observation.

Counselling an TB/HIV Patient

Many a times you will have clients who are not only HIV infected but also have TB disease. Such patients require not only counselling on HIV but for TB also. Apart from the basic information that is provided on HIV and TB, the under mentioned issues need to be emphasized on HIV-TB patients.

1. TB is curable amongst HIV positive persons.
2. Treatment with DOTS improves the quality of life of an HIV infected person by an average of two years.
3. The quality of life will improve and prevent further transmission of TB in other family members.

EXERCISE: CASE STUDIES FOR ROLE PLAY

Case Study One:

Roshni, 24 years old housewife, has come for HIV testing. She has consented for HIV test. Her husband had died due to AIDS. She has no symptoms. Impart information to Roshni on TB.

Case Study Two:

Shamlal is a 35 year old farmer. He has come to VCTC for HIV test, as his friend had told him that this test is available at civil hospital for Ten Rs. On enquiry, Shamlal reports of having multiple sexual partners. He also gives history of suffering from TB. He had taken treatment for TB for two month and had stopped treatment since a month as his symptoms subsided. Shamlal felt that he need not take treatment for TB as he is not having symptoms.

Case Study Three:

Ramesh is a 30 year old HIV positive. Presently he is having cough since a month. Though he understands that he may probably be having TB, he is reluctant to go to the Designated Microscopy Centre.

Case Study Four:

Radhika, a 20 year old girl, has come for an HIV test. During counselling she tells you that she has a swelling in the neck. On further enquiry, the patient gives a history of loss of weight, loss of appetite and low grade fever since a month.

COUNSELLING TB/HIV PATIENT

9. Guidelines for operationalisation of VCTC-RNTCP cross-referral linkages

Service linkages between VCTC and RNTCP diagnostic and treatment centres are the most important area of co-ordination between the HIV/AIDS and TB Control programme. RNTCP visualizes VCTC as a PHI referring TB suspects irrespective of their sero-status. VCTC's will identify and refer suspected TB cases to the RNTCP Designated Microscopy Centres. Whereas Designated Microscopy Centres/ OPD/ wards may refer TB patients for counselling and diagnosis of HIV infection, they could also refer known HIV positive TB patients to the VCTC for Counselling.

Steps for operationalisation

- Ensure that the VCTC, DMC and DOT centre are in the same campus. In case they are not in the same campus, establish referral linkages between them
- Ensure that all the VCTC and RNTCP staff, including the LT of the DMCs and VCTC, are trained in TB/HIV
- Provide RNTCP Laboratory Forms of sputum examination for referral of patients from VCTC to RNTCP DMCs
- Provide a DMC and DOT centres directory to all the VCTCs
- Ensure posters on TB are displayed at the VCTC's and provide any other IEC material on TB that is available for distribution to clients
- Confidentiality of HIV status must be ensured at all levels by all staff. Remember that the HIV status of a patient should not be mentioned in the Treatment card, TB lab Register or any other document. Do not use any symbols/codes for identification of HIV positive persons
- The VCTC Counsellors are to visit the DMCs, and the STSs are to visit the VCTCs to follow-up on referred cases.
- Monthly RNTCP Review meetings are to be attended by the VCTC staff.
- State TB Officer, State VCTC Programme Officer, District TB Officer and District Nodal Officers (HIV/AIDS) to review TB/HIV co-ordination activities during their periodic field visits.

There are two types of Referrals: VCTC to RNTCP and RNTCP to VCTC

Referral of Persons from VCTC to RNTCP

The Process at VCTC

VCTC Counsellors will identify persons with symptoms suggestive of TB disease amongst the clients. The Counsellor will ask each and every client for history of cough for more than three weeks and other associated symptoms of TB. These patients depending on their symptoms will be referred for appropriate investigation. Patients, irrespective of their serostatus, having cough will be referred to Designated Microscopy

Centre (DMC) for sputum examinations and in case of symptoms of Extra-pulmonary TB, the patient should be referred to the appropriate doctor. The RNTCP sputum examination form will be filled in by the Counsellor. On the sputum examination form, the Counsellor should fill in all the required details including the name of VCTC, and take special care in obtaining and recording correct residential address. The counsellor will not mention the HIV status of patient on the form or elsewhere, but shall encourage the patient to disclose his HIV status (if known) to the treating physician, in the interest of better case management. The sputum examination form is given to the patient with specific instructions on the location and timings of the DMC. The Counsellor should make a detailed note of the referral in the Counselling Register.

The counsellor should impart information / counselling on TB to all VCTC clients and should document the same in the counselling register, irrespective of whether they have signs or symptoms of TB or not. Either a column can be added in the Counselling register to document the information on persons who received information / counselling on TB or record it in the 'Remarks column' of Counselling Register. During counselling, encourage voluntary disclosure of HIV status by the client to the treating physician in those referred.

The Process at Designated Microscopy Centre

Once the patient reaches the Designated Microscopy Centre, the patient will undergo the same process as any other TB suspect, i.e. the diagnostic algorithm of RNTCP will be followed. The Laboratory Technician will enter the details of the patient, including correct residential address, in the TB Laboratory Register and clearly mention the name of VCTC as the referring unit in TB laboratory register. After all the three sputum examinations are done, the results of the test are given to the patient. Patient will go to the Medical Officer, who will decide on further management.

In case of Extra-pulmonary TB, the VCTC will refer the patient to the Medical Officer, who will further refer the patient for necessary investigations. After obtaining the test results, the Medical Officer will decide further course of management.

If the patient is having TB (Pulmonary or Extra-pulmonary TB), treatment categorization is done as per the RNTCP treatment algorithm. Known HIV positive persons, diagnosed with TB disease for the first time (new TB cases) will receive RNTCP Category I regimen whereas retreatment TB cases will receive Category II regimen. Voluntary disclosure of the HIV status by the client should be encouraged. Based on patient's area of residence, these patients are referred for treatment to the nearest DOT centre. A home visit is done to confirm the patient's address. Once the address verification is over and the patient is convinced to take DOTS for the required duration, the treatment is started. Patient's treatment card is made. Once the patient is started on treatment, the Senior Treatment Supervisor (STS) will enter the patient's information in the TB register and give a TB number, which is mentioned in the treatment card. In cases of referral for treatment to another district / TU, special care must be taken to obtain a feedback from the receiving district / TU about the start of treatment. STS and VCTC counsellor will coordinate to check how many of the referred patients did reach DMC and record the outcome of the referral.

Please note that HIV status of the person should NEVER be mentioned in the TB treatment card, TB Register or any other RNTCP document. Neither should any symbol

be used to identify HIV infected TB patients. No separate record is to be maintained for recording the information on TB/HIV patients.

Recording information on TB status of persons referred by VCTC

If the patient comes back to VCTC after attending the TB OPD, the information regarding the diagnosis should be recorded in to the Counselling Register. For the remaining patients, at the end of the next month, when the information about the TB suspects referred from VCTC is provided in the Line-List by STS, this information is transferred onto the Counselling Register.

Referral of TB Patients to VCTC for HIV-Testing

Process at RNTCP Unit

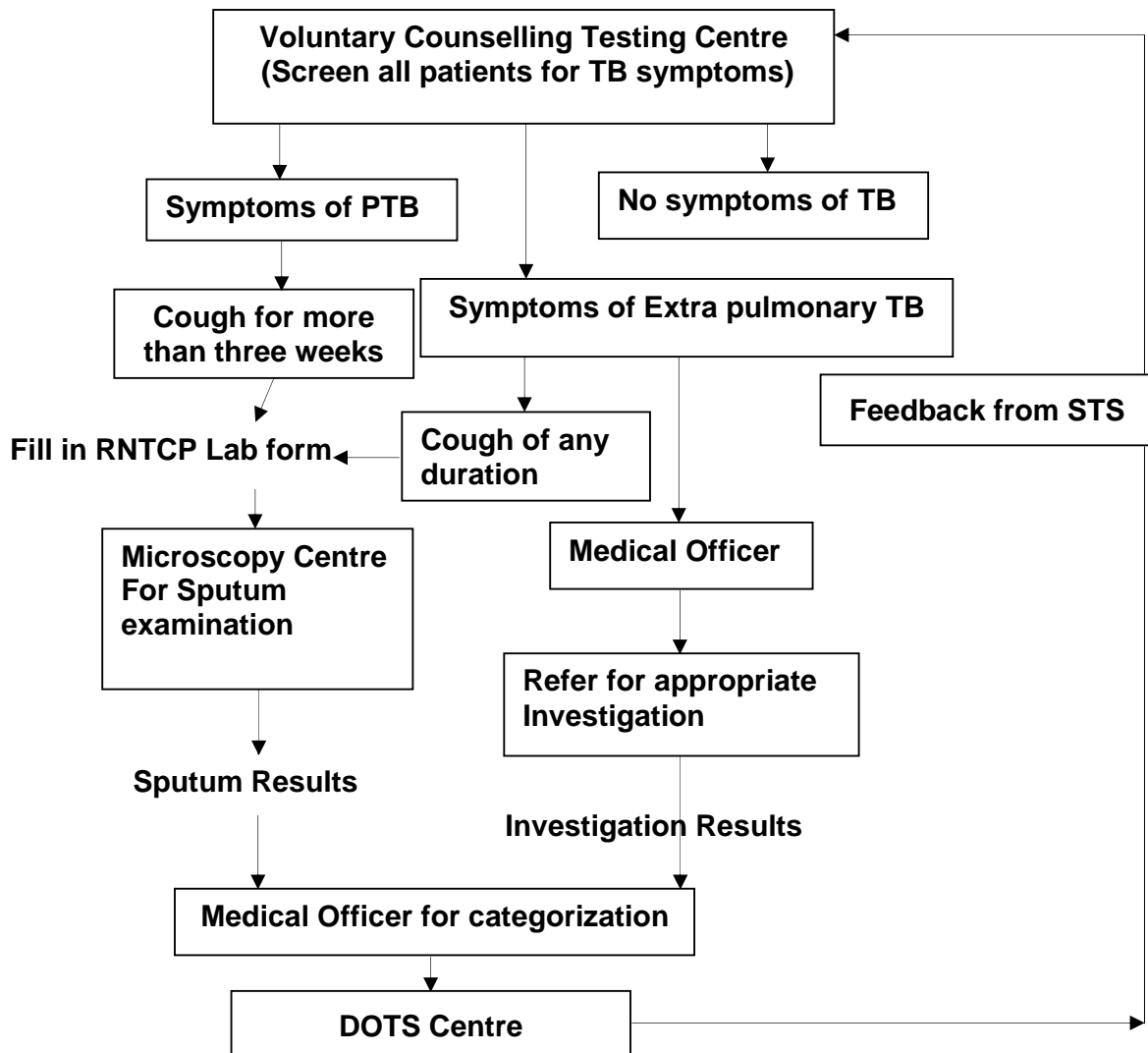
Diagnosed TB patients who have symptoms/signs suggestive of HIV infection will be referred by the medical officer to the VCTC. Thus, these diagnosed TB patients may be referred from DMC, DOT Centre, Out-patient clinics, TB ward, TB Clinic etc. Sometimes the patient may simultaneously be investigated for TB and HIV. The doctor should first complete the investigations for TB and then refer for HIV investigations. While referring to the VCTC, the doctor should write a referral note to VCTC in which the TB status of the person is mentioned. The referral of the TB patients to the VCTC for eliciting the HIV status for the sake of categorisation should never be done.

Process at VCTC

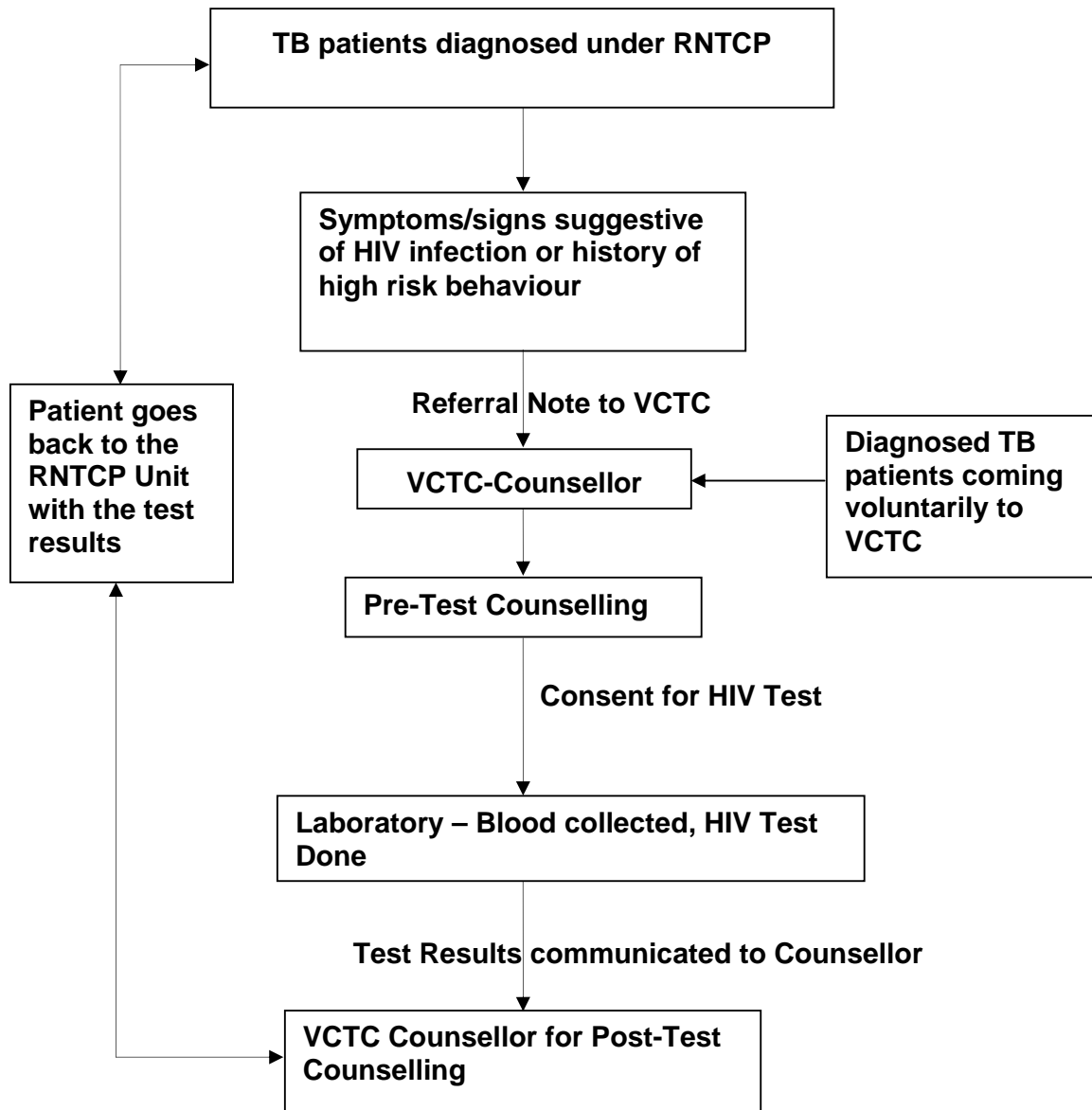
Once the referred TB patient reaches VCTC, the same procedure will be followed as that for any other client attending VCTC. Some TB patients may come on their own for HIV Testing (Direct Walk-In).

At the VCTC, the patient/client will undergo pre-test counselling. HIV testing is done after obtaining informed consent. The details of the patient/client will be entered into the PID register and Counselling Register. HIV testing is done and the test results are handed over by the Laboratory Technician to the Counsellor. The counsellor reveals the HIV test result to the patient/client with post-test counselling. The HIV test results are not revealed to any other person other than the individual himself.

Referrals from VCTCs to RNTCP diagnostic and DOT Centres



Process of Referral from RNTCP to VCTC



Monthly Report

VCTC-RNTCP co-ordination is monitored with the help of the monthly report on TB/HIV activities. In order to prepare the monthly report, the first step will be to make the Line-List. Preparing the Line-List will be the joint responsibility of the VCTC and RNTCP. The Line List for patients referred in the month of January, will be completed in the first week of March (fifth of the month) by the Counsellors and STS. Once the Line-List is completed, the monthly report will be prepared by the VCTC. The completed Line List and the Monthly Report will be compiled and submitted by the VCTC to all the concerned Officials (State AIDS Control Society, DTO) by the 10th of the month. The time taken for diagnosis and initiation of TB treatment may take up to 7 days and registering the patient in the TB register may take another few days and a maximum up to 1 month. Therefore, there will be a delay of one month in reporting of TB/HIV cross-referral. It means that the report of January will be submitted in March, that of February in April and so on.

At the SACS, the information on TB/HIV activities will be compiled and centre-wise report along with the monthly report for the entire state will be sent to NACO, State TB Office and Central TB Division by the 20th of every month

Line-List of Persons Referred from VCTC to RNTCP

The Line-List is prepared for each VCTC in the district separately. On the Line-List, the name of the VCTC, the district and the reporting month/year is to be filled in by the VCTC counsellor. The Line List has two parts. Part A, i.e. columns 1 to 8 contains information on the persons referred by VCTC to RNTCP. Part A is to be completed by the VCTC Counsellors and signed by the VCTC Counsellors and the In-charge of VCTC. Below the signature, date of completion of Part 'A' is to be mentioned. Note that only those persons who have been sent from VCTC to RNTCP are included here.

PART A of LINE-LIST

COLUMN NO.	COLUMN TITLE	WHAT SHOULD BE WRITTEN
1	Sr. No.	This is the serial number that you will write as you are making the line-list
2	PID No.	PID No. (Person Identification Digit No) is the number that the VCTC Counsellor has given to the client.
3	Complete Name and Complete Address	It is important to have the complete name and address of the person, otherwise it is difficult to trace out whether these persons have reached RNTCP Unit, whether they have been investigated and put on treatment. Therefore the VCTC Counsellor should write the complete name of the person.
4	Age	Age of the person should be mentioned
5	Sex	Male, Female or Transgender (Eunuch) should be mentioned
6	New or Follow Up Patient	Those patients who have come for the first time are labelled as 'new patients'. This includes those patients who have come for pre-test and post-test counselling.

		Follow Up Patients are those who have come to the VCTC after post-test counselling. This includes both HIV positive and HIV negative persons who come for follow up counselling.
7	Date of Referral	The date when the client is referred to the RNTCP Unit
8	Name of RNTCP Unit referred to	RNTCP Unit includes DTC, DMC, TB OPD, TB Clinic etc i.e. any health facility where the facility for sputum investigation for TB under RNTCP is available. In case the patient is referred to a doctor/OPD, the name of the OPD should be mentioned. For sputum examination, the counsellor should identify the Microscopy Centre that is convenient for the patient. The Counsellor should record the name of the centre the person has been referred to.

The Counsellor will meet the STS with the line list on the 1st or 2nd of the next month, i.e. the Line List for patients referred in the month of January, will be completed (Columns 1-8) in the first week of February by the Counsellors and handed over to the STS. The Counsellor should remember that HIV status should not be mentioned in the Line-List.

The STS/STLS will scan through the TB laboratory register to find out whether these patients have undergone the sputum microscopic examination. If the patient is sputum positive, then the TB number as mentioned in TB laboratory register will tell whether the patient has been started on DOTS and the treatment category. If the patient is sputum negative, then look for the patient in the TB register of the concerned Tuberculosis Unit. If patient was suspected of having Extra-pulmonary TB, referring to the TB register would be helpful. For diagnosed TB patients referred out for DOTS treatment to another TU, the STS of the corresponding TU should be consulted, and for referrals for treatment outside the District the 'referral for treatment' register at the DMC should be scrutinized.

Once the Line-List is completed, the STS will sign the list and write the date of completion of Line-List. The STS will then take the signature of the concerned DTO/CTO or MO-TC. This Line List is handed over to the VCTC Counsellor by the fifth of the month.

Part B of LINE-LIST

COLUMN NO.	COLUMN TITLE	WHAT SHOULD BE WRITTEN
9	Has person reached RNTCP Unit (Yes/No)	<p>To know whether the patient has reached the RNTCP Unit, refer to the TB Laboratory Register of the DMC where the patient has been referred. If the patients name is located in the TB Laboratory register, write 'YES' in the Line-List. If the patient has not reached DMC, write 'NO'.</p> <p>In case of Extra-pulmonary TB, where the patient has been referred to a doctor, asking the concerned doctor would be helpful. This information should be obtained from the concerned doctor immediately after referral and recorded in the Counselling register by the Counsellor. If the patient has reached the OPD and examined by the doctor, write "YES' in the Line-List. If patient has not reached the centre, mention 'NO'.</p> <p>Counsellor should coordinate and ensure all such patients are referred to RNTCP treatment unit, once diagnosis is established.</p>
10	Has Patient undergone three sputum Examination – (Yes/No)	<p>If patient has undergone complete sputum examinations, then mention 'YES'</p> <p>If patient's only one sputum examination is done, mention 'NO' in the Line-List. Sometimes, after the patients name is entered in the TB Laboratory Register, the patient does not give sputum sample. In such a case mention 'NO' in this column.</p> <p>In case of EP TB, where the patient does not require sputum examination, write 'not applicable'</p>
11	Date of Sputum Examination	The exact date on which the sputum examination was done
12	Sputum Result – Sputum Positive/Sputum Negative (If three sputum examinations are done)	Record the result of sputum examination for all those patients who have undergone complete sputum examinations. The sputum result is mentioned as sputum positive or sputum negative. In case of sputum positive do not mention the grade, only mention sputum positive
13	Date and Investigation Report for Extra-pulmonary TB	In case where the patient has been referred for Extra-pulmonary Investigations like FNAC, X-ray etc, the date of investigation and the results of investigation should be mentioned.
14	Is patient diagnosed as TB –Yes or No	If the patient is diagnosed as TB mention 'YES' and if non-TB mention 'NO'. For getting this information, the STS will need to check the TB Laboratory Register, Treatment Referral Register and the TB Registers

15	If diagnosed as TB, specify whether patient is sputum positive TB, sputum negative TB or Extra-pulmonary TB	If the patient is diagnosed as TB, the STS should mention whether the patient is sputum positive TB, sputum negative TB or Extra-pulmonary TB.
16	Is patient receiving DOTS or Non-DOTS	Once diagnosed, the patient should be started on treatment. From the TB register, find out whether the patient is receiving RNTCP DOTS or non-DOTS. Mention DOTS if patient is being treated under RNTCP regimen and 'Non-DOTS' if under any other regimen
17	Treatment Category	If patient is receiving treatment, mention the treatment Category. Category I/II/III for DOTS regimen Or the NTCP regimen if non-DOTS
18	Date of Starting Treatment	The date of starting treatment as mentioned in the TB register should be recorded in the Line-List.
19	TB No.	From the TB register, write the TB no.
20	Remarks	The following information can be entered in the remarks column. <ul style="list-style-type: none"> • Name of the DOT centre to which patient has been referred to • Name of the district, if the patient is from another district • If patient has died, date when expired • Reason for placing the patient on Non-DOTs regimen • If patient is from the district and has not been started on treatment, mention the reason. • Any other

Monthly Report of TB/HIV activities at VCTC

The monthly report (Annex.) contains information on TB/HIV activities of the VCTC; no. of referrals made by VCTC to Microscopy Centre and no. diagnosed as TB amongst them; information about TB patients referred for HIV testing and their HIV status and no. of clients receiving information on TB.

Once the line list is completed, the VCTC Counsellors prepares the monthly TB/HIV report which has only aggregate numbers and no reference to any individual patients.

Section I: TOTAL NUMBER OF CLIENTS ATTENDING VCTC:

INDICATOR	WHAT SHOULD BE WRITTEN
a) No. of clients who received Pre-test Counselling	Refer to the Counselling Register and count the number of clients who have received pre-test counselling for the month. The reporting period is from day one of the month to the last day of the month
b) Out of above (a), No. detected to be HIV Positive	Out of the clients who received pre-test counselling, count the number of clients who are HIV positive. Those clients who are sero-positive by three different test kits/principle are counted as HIV sero-positive.
c) No. of HIV Positive and HIV Negative Follow-up Clients who attended VCTC	Count the number of HIV positive persons (I) who came for Follow Up Counselling in the month Count the number of HIV negative persons (II) who came for Follow UP Counselling in the month Add (I) and (II) to get the total no. of clients who came for follow up counselling

Section II: REFERRAL OF SUSPECTED TUBERCULOSIS CASES FROM VCTC TO RNTCP

INDICATOR	WHAT SHOULD BE WRITTEN
a) No. of persons suspected to have TB referred to RNTCP Unit	From the Line-List count the total number of persons suspected to have TB who were referred to RNTCP Unit. Referring to the Counselling register, count how many of these persons are HIV sero-positive and how many are HIV sero-negative. Mention accordingly under the appropriate columns in the monthly report. In case the person has not undergone HIV test, but still has been referred to RNTCP he will not be included in this indicator even though his name is there in the line-list. Similarly in case of indeterminate HIV test results, the person will not be counted.
b) Out of above (a) referred cases, No. who have reached RNTCP Unit	Out of the HIV sero-positive persons referred count the number of persons who reached the RNTCP Unit. Similarly count the HIV sero-negative persons who reached the RNTCP Unit. The information on whether the person has reached the RNTCP Unit is available in the <u>column no. 9 of the Line-List</u>

<p>c) Out of above (b) no. who have undergone complete Investigation</p>	<p>Now count the number of HIV sero-positive persons who have undergone complete investigation. Now count the number of HIV sero-negative persons who have undergone complete investigation. The information on whether the person has undergone complete investigation is available in the column no. 10 and 13 of the Line-List. In case of suspected pulmonary TB check column no. 10. If three sputum examinations are done, it means the patient has undergone complete investigations. In case of suspected Extra-pulmonary TB check column no. 13. If the patient has undergone relevant investigation for Extra-pulmonary TB, it means the patient has undergone complete investigations.</p>
<p>d) Out of the above persons undergoing complete investigation(c), No. diagnosed as having:</p>	<p>Count the total number of HIV sero-positive persons diagnosed as TB. Count the total number of HIV sero-negative persons diagnosed as TB. The information on the persons diagnosed as TB is available from <u>column no. 14 of the Line-List.</u></p>
<p>(i) Sputum Positive TB</p>	<p>Out of the HIV sero-positive TB patients count the number of sputum positive TB. Out of the HIV sero-negative TB patients count the number of sputum positive TB. The information on whether the person is diagnosed as sputum positive TB is available from <u>column no. 15 of the Line-List.</u></p>
<p>(ii) Sputum Negative TB</p>	<p>Out of the HIV sero-positive TB patients count the number of sputum negative TB. Out of the HIV sero-negative TB patients count the number of sputum negative TB. The information on whether the person is diagnosed as sputum negative TB is available from <u>column no. 15 of the Line-List.</u></p>
<p>(iii) Extra-Pulmonary TB</p>	<p>Out of the HIV sero-positive TB patients count the number of Extra-pulmonary TB. Out of the HIV sero-negative TB patients count the number of Extra-pulmonary TB. The information on whether the person is diagnosed as Extra-pulmonary TB is available from <u>column no. 15 of the Line-List.</u></p>
<p>e) Out of above (d), diagnosed TB patients, number receiving DOTS</p>	<p>Out of the HIV sero-positive TB patients count the number of persons receiving DOTS. Out of the HIV sero-negative TB patients count the number of persons receiving DOTS Include only those persons who are being treated with DOTS and whose TB number is available. Referring to column no. 16 and 19 of the Line-List will give this information.</p>

Section III: REFERRAL OF DIAGNOSED TB PATIENTS FROM RNTCP TO VCTC

INDICATOR	WHAT SHOULD BE WRITTEN
a) No. of TB patients attending VCTC (referred or Direct Walk-In)	<p><u>Referred Patients</u> Referring to the Counselling register, count the number of persons who have been referred from RNTCP Unit (I). This information is obtained from <u>column no. 3 and 11 of the Counselling Register</u></p> <p><u>Direct Walk-In Clients</u> Check column no. 3 and 11 of the Counselling register to see whether any diagnosed TB patient came on his own to VCTC. Count these known diagnosed TB patients who came as direct walk-in clients to the VCTC (II). Add (I) and (II) to get the total number of TB patients (a) attending VCTC. Note that those persons who have been referred from VCTC to RNTCP are excluded in this section</p>
b) Out of above (a), No. Tested for HIV	Count the number of persons who consented for the HIV test(b) out of the above mentioned diagnosed TB patients Column no. 13 of the counselling register contains information on whether the person has consented for the HIV test. Therefore check column no's. 3, 11 and 13 to get the complete information
c) Out of above (b), No. detected to be HIV Positive	Now count the number of persons who were found to be HIV positive out of (b) Column no. 15 of the counselling register contains the HIV test result. Therefore check column no's. 3, 11 , 13 and 15 to get the complete information

Section IV: IEC ACTIVITIES

No. of clients/patients receiving information / counselling on TB	<p>There is no column in the Counselling register to record the information about the persons receiving counselling on TB. The Counsellor can add an extra column, after remarks column, titled as 'Information/Counselling on TB'. If the Client has been given information on TB, write 'YES'. Count the number of persons who received information/counselling on TB from the column 'Information/Counselling on TB' of the Counselling Register. Remember to include not only new patients, but also follow up patients who have come for counselling and have been imparted information on TB again.</p>
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The monthly report signed by the In-charge VCTC should be completed by the 5th/6th of the month and sent to District Nodal Officer for HIV/AIDS, District TB Officer and the SACS office so as to reach latest by 10th of the month. The District TB Officer compiles the reports of all VCTC in the district reports monthly to the state and reports quarterly

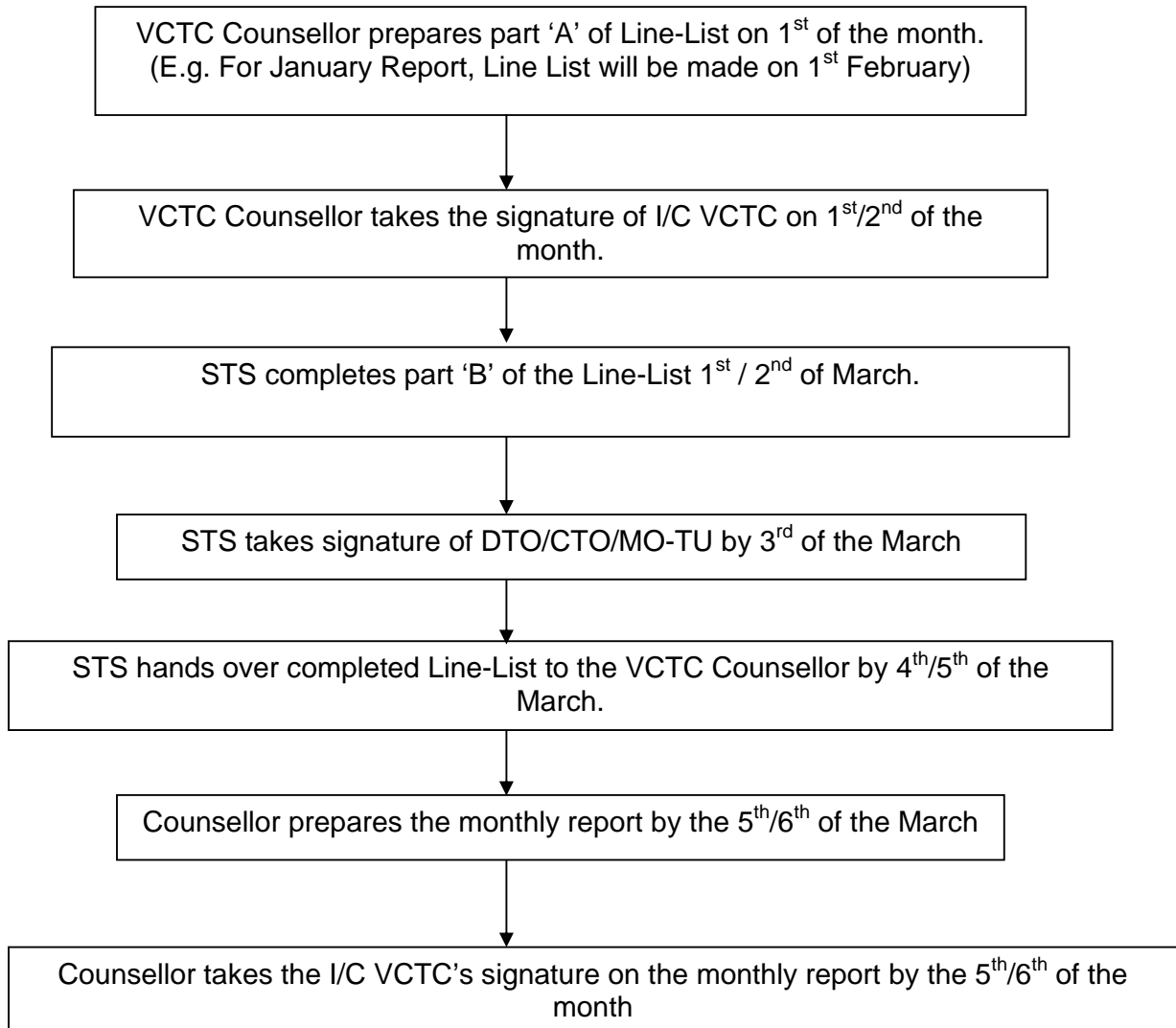
in the RNTCP Quarterly report to the Centre and the State. The reports are dispatched by the DTO with a gap of one quarter i.e. TB/ HIV report for the first quarter of 2005 will be reported in the RNTCP programme management report of the second quarter, 2005

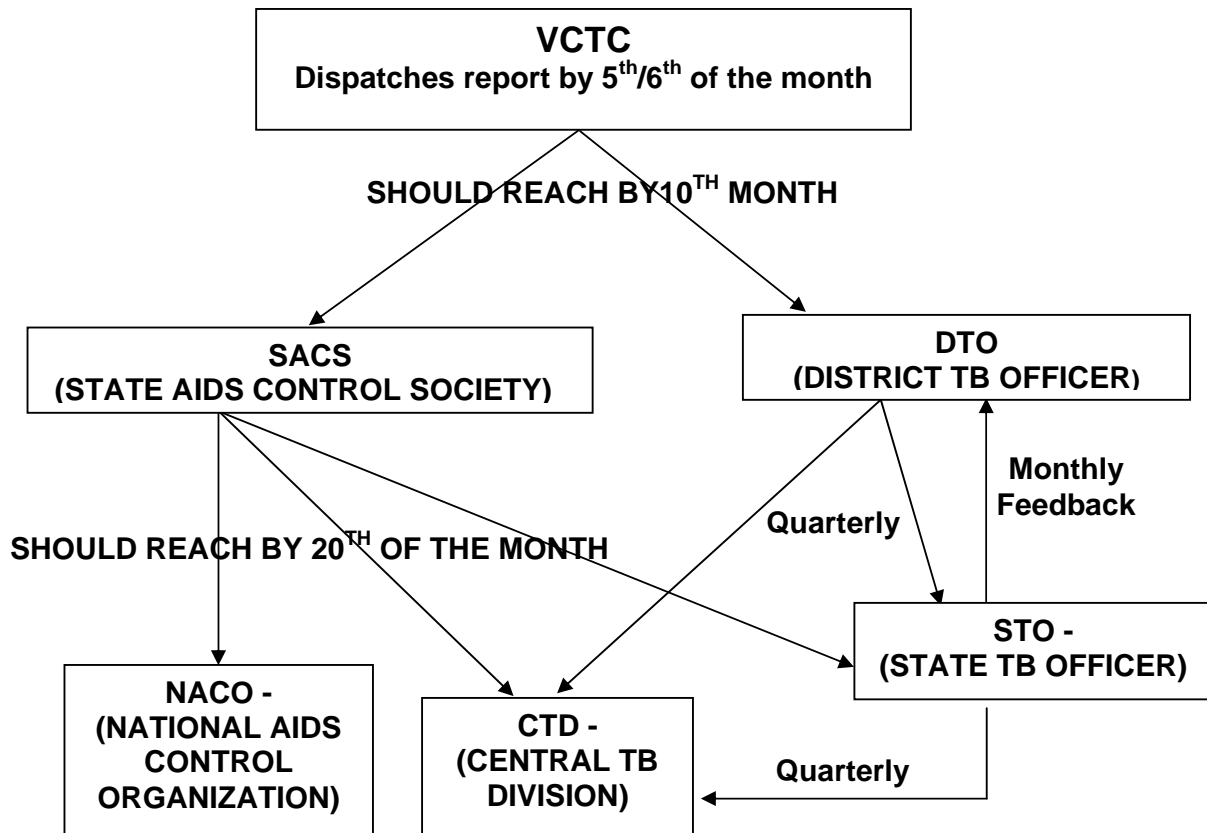
Process of Sending Monthly Report

At District Level: The report will be sent by the VCTC to the District Nodal Officer for HIV/AIDS, District TB Officer and the State AIDS Control Society. The report should reach State AIDS Control Society by 10th of the month. A copy the TB/HIV report is given to the concerned District Tuberculosis Officer/City TB Officer who in turn compiles the reports and reports quarterly in the RNTCP programme management report. The Counsellor also sends a copy of the Line-List to the SACS

At State Level: At the state level, at the SACS the information on TB/HIV activities will be compiled and a centre-wise report along with the monthly report for the entire state will be sent to NACO and CTD by the 20th of every month. A copy of this report will also be sent by SACS to the State TB Office.

Process of Preparing the Monthly Report





Role of VCTC and RNTCP Staff

Role of Counsellor

1. Referral of suspected TB patients to microscopy centre
2. Impart information on TB to all the VCTC Clients.
3. Maintain confidentiality, follow-up of drop-outs partner counselling and testing, creating community awareness
4. Know where to refer patient for sputum microscopy
5. Educate HIV positive persons about the symptoms and signs of TB and importance of reporting to the Counsellor/ Designated microscopy centre at the earliest.
6. Encourage HIV positive clients with TB to reveal their HIV status to the treating physician
7. Provide VCT services to patients referred from RNTCP
8. Send the report of TB/HIV activities regularly to State AIDS Control Society, District Nodal Officer of AIDS and District TB Officer every month
9. Send a copy of Line-List to the State AIDS Control Society every month duly signed by all the concerned staff.

Role of STS/STLS

1. Ensure that the Lab Tech of DMC, mentions name of VCTC in TB Lab Reg.
2. Ensure and maintain strict confidentiality in dealing with all cases of TB/HIV.
3. If asked by TB patients, provide information about HIV/AIDS and the facilities available for HIV Counselling and testing.
4. Ensure the availability of Sputum Laboratory forms and DOTS directory at the VCTC
5. Give feedback to the VCTC counsellors regarding the TB status of persons referred from VCTC to Microscopy Centres.
6. Co-ordinate with the VCTC Counsellors for preparing and completing the line-list.

Role of MO-VCTC

1. Ensure Counsellors screen VCTC clients for symptoms of TB
2. Ensure Counsellors are attending the monthly review meetings of RNTCP
3. Check the counsellors registers to verify if documentation is being done properly
4. Ensure that the Counsellors coordinate with the RNTCP staff and prepare the line-list and monthly report
5. Ensure that the report is complete and correct and duly signed.
6. Ensure the timely submission of reports.

Role of MO-TU

1. Ensure Lab Technician records referrals received from VCTC in TB Lab. register.
2. Ensure STS completes the line-list and hands over the completed Line-List to the Counsellor on time.
3. Ensure confidentiality of HIV status is maintained.
4. Ensure the prevention of spread of HIV through safe injection practices
5. Refer TB patients suspected to have HIV to VCTC
6. Refer known HIV positive patients to VCTC for Counselling

Role of DTO

1. Facilitate the Quarterly meetings of District TB/HIV Co-ordination Committee.
2. Ensure the availability of the logistics to all the VCTC's in the district
3. Ensure Lab Technician records referrals received from VCTC in TB Lab. register.
4. Ensure the STS coordinates with the Counsellor for completing Line-List
5. Conduct regular monthly meetings between VCTC and RNTCP staff
6. Ensure confidentiality of HIV status is maintained.
7. Ensure VCTC and RNTCP staffs are trained in TB/HIV.
8. Ensure appropriate measures are taken to prevent spread of TB in facilities caring for HIV-AIDS
9. Ensure the prevention of spread of HIV through safe injection practices
10. Timely submission of TB/HIV report to CTD and STO. DTO reports quarterly in the programme management reports. The reports are dispatched with a gap of one quarter i.e. TB/ HIV report for the first quarter of 2004 will be reported in the RNTCP programme management report of the second quarter.

Annex 1

REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME

Laboratory Form for Sputum Examination

Name of Referring Health Facility: _____ Date: _____

Name of patient: _____ Age: _____ Sex: M F Complete address: _____
_____Type of suspect / disease: Pulmonary Extra-pulmonary Site: _____

Reason for examination:

 Diagnosis Repeat Examination for Diagnosis Follow-up of anti-TB treatment

Patient's TB No _____

(Name and signature of referring person/ official)

If sputum sample are being transported:

Specimen identification No.: _____ Date of sputum collection: _____

Specimen Collector's name and signature _____

RESULTS (To be completed in the laboratory of DMC)

Name of DMC: _____

Lab. Serial No.: _____

Date of examination	Specimen	Visual appearance (M, B, S)*	Results (Neg or Pos)	Positive (grading)			
				3+	2+	1+	Scanty**
	a						
	b						
	c						

* M = Mucopurulent, B = Blood stained, S = Saliva

** Write actual count of AFB seen in 100 oil immersion fields

Date: _____ Examined by (signature): _____

The completed form (with results) should be sent to the referring PHI within one day of the examination.

ANNEXURES

Annex 2

LINE-LIST OF PERSONS REFERRED FROM VCTC TO RNTCP

REPORTING MONTH: _____ YEAR _____

NAME OF VCTC: _____

NAME OF DISTRICT: _____

TO BE COMPLETED BY VCTC COUNSELLOR								TO BE COMPLETED BY STS													
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20		
Sr. No.	PID NO.	Complete Name & Complete Address	Age	Sex	New or Follow Up Patient	Date of referral	Name of RNTCP Unit referred to	Has Person reached RNTCP Unit (Yes/No)	Has Patient undergone three sputum Examination -(Yes/No)	Date of Sputum Examination	Sputum Result - (Sputum Positive/Sputum Negative) (If three sputum examinations are done)	Date and Investigation Report for Extrapulmonary TB	Is patient diagnosed as TB - Yes or No	If diagnosed as TB, specify whether patient is sputum positive TB, sputum negative TB or Extrapulmonary TB	Is patient receiving DOTS or Non-DOTS	Treatment Category	Date of Starting Treatment	TB No.	Remarks		
<i>Sign of Counsellor MO- VCTC</i> <i>Sign of Counsellor</i> <i>Sign of</i> Date of completion:								<i>Signature of STS</i> Date of Completion:												<i>Signature of DTO/CTO/MO-TU</i>	

ANNEXURES

Annex 3

REPORT OF TB-HIV ACTIVITIES AT VOLUNTARY COUNSELLING TESTING CENTRE
FOR THE MONTH OF _____ YEAR _____

Name of VCTC:

Name of the District:

I. TOTAL NUMBER OF CLIENTS ATTENDING VCTC:

a) No. of clients who received Pre-test Counselling	
b) Out of above (a), No. detected to be HIV Positive	
c) No. of HIV Positive and HIV Negative Follow-up Clients who attended VCTC	

II. REFERRAL OF SUSPECTED TUBERCULOSIS CASES FROM VCTC TO RNTCP

	HIV positive	HIV Negative
a) No. of persons suspected to have TB referred to RNTCP Unit		
b) Out of above (a) referred cases, No. who have reached RNTCP Unit		
c) Out of above (b) no. who have undergone complete Investigation		
d) Out of the above persons undergoing complete investigation(c), No. diagnosed as having:		
(i) Sputum Positive TB		
(ii) Sputum Negative TB		
(iii) Extra-Pulmonary TB		
e) Out of above (d), diagnosed TB patients, number receiving DOTS		

III. REFERRAL OF DIAGNOSED TB PATIENTS FROM RNTCP TO VCTC

a) No. of TB patients attending VCTC (referred or Direct Walk-In)	
b) Out of above (a), No. Tested for HIV	
c) Out of above (b), No. detected to be HIV Positive	

IV. IEC ACTIVITIES

No. of clients/patients receiving information / counselling on TB	
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Signature of Medical Officer - Incharge VCTC

Name of Medical Officer- Incharge VCTC



ANNEXURES