REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME (RNTCP)

Module *for* Senior Treatment Supervisors (STS)

Part 2: Ensuring Proper Registration and Reporting

Successful completion of the 'Module for Multi-purpose Workers' is a prerequisite for successful completion of this module.

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CONTENTS

MAINTAIN THE TUBERCULOSIS REGISTER

It is essential that the Tuberculosis Register is accurate and up-to-date. Quarterly Reports, which are the primary means of programme evaluation, are completed on the basis of the Tuberculosis Register.

It is very important to register in the Tuberculosis Register **every** patient who is starting treatment for tuberculosis. Relevant information should be collected from the Tuberculosis Treatment Cards and then recorded in the Tuberculosis Register. Whenever possible, meet with the patient when you register him and at the same time verify the information. When it is not possible to meet with the patient directly, speak with a health worker who knows the patient. Use the patient's Tuberculosis Treatment Card and any additional information provided to you in order to complete the LEFT side of the Tuberculosis Register. (The left side of the register is all information up to the **Pretreatment** column.)

Make sure that the information on the patient's Tuberculosis Treatment Card is correct before writing it in the Tuberculosis Register. Read out the general information (for example name, age and address) to the patient and ask him if it is correct. For example, the spelling of the patient's name could have been recorded incorrectly, or the patient might have given an incomplete address. If needed correct the information on the Tuberculosis Treatment Card before writing it in the Tuberculosis Register. (There is some information in the Tuberculosis Treatment Card that is not recorded in the Tuberculosis Register, such as name and address of the contact person. This information should also be verified for completeness and accuracy at this time.)

TB No.

Assign a new Tuberculosis Number to each patient who is being registered and write this number in the Tuberculosis Register. Start with the number 1 at the beginning of every year. As each patient is registered, add 1 to this number.

Example:
Today is 13 June and you are registering 3 patients. The last TB No. in the Register is 64. Assign the 3 patients Tuberculosis Numbers 65, 66, and 67.

Date of registration

Write the date on which you are registering the patient in the Tuberculosis Register.

The day and month should be written as: day/month (for example 13 June would be written as 13/6).

After you write the patient's Tuberculosis Number in the Tuberculosis Register, write this number on the **TB No.** line of his Tuberculosis Treatment Card. Transferring of information such as results of sputum smear examination from Tuberculosis Treatment Card is facilitated by referring to the patient's Tuberculosis Number.

Name (in full), Sex, Age, Complete address

This information is available on the patient's Tuberculosis Treatment Card. Make sure the information is correct before you write it in the Tuberculosis Register.

Name of Treatment Centre

The name of the unit where the patient will be treated by a Medical Officer (MO) should be written on the **Health Unit** line of the patient's Tuberculosis Treatment Card.

If this information is *not* mentioned in the Tuberculosis Treatment Card, ask the patient or the health worker to provide you with this information. Then record the name of the treatment unit in the Tuberculosis Register and on the **Health Unit** line of the patient's Tuberculosis Treatment Card.

Date of starting treatment

To determine if the patient has started treatment, look at the drug administration table at the bottom of the front side of his Tuberculosis Treatment Card. If a box has been ticked, the patient has already started treatment. The first box that is ticked (✓) is the **first** day that the drugs were administered to the patient. If the patient's Tuberculosis Treatment Card indicates that the patient has **not** yet started treatment, find out when he will begin treatment.

Write the date the patient will begin treatment or has already begun treatment on the first line of this column. (Patients often begin treatment **before** they are registered. You may register patients who began treatment in a health centre or hospital during your periodic supervision. In this case,

the date when the treatment started may be even one month before the date of registration of the patient. Every patient must be registered within one month of starting treatment.)

Regimen/Category

To determine which treatment regimen was assigned to the patient, look at the patient's Tuberculosis Treatment Card under the **Initial Intensive Phase** section. One of the boxes will be ticked to indicate whether the patient was assigned Category I (CAT I), Category II (CAT II), or Category III (CAT III).

Write the treatment regimen (CAT I, CAT II, or CAT III) in the **Regimen/ Category** column of the Tuberculosis Register.

Disease class (P/EP)

Write **P** if the patient has pulmonary tuberculosis. Write **EP** if the patient has extra-pulmonary tuberculosis. This information is provided on the patient's Tuberculosis Treatment Card under the **Disease Classification** section. In the rare case, if a patient has both pulmonary and extra-pulmonary TB, he should be classified as pulmonary **(P)**.

Type of Patient

Look at the patient's Tuberculosis Treatment Card under **Type of Patient** section to determine whether the patient is a New case, Relapse, Transfer in, Failure, Treatment After Default, or Other. Write the appropriate letter indicating the type of patient in the Tuberculosis Register, as shown below:

Type of Patient					
New case (N)	**Relapse (R)**	**Transfer in (T)**	**Failure (F)**	**Treatment After Default (D)**	**Other (O)**
N					
	R				
				D	
N					
N					
N					

For a patient classified as Other, write the details in the **Remarks** column.

Sputum examination/Pretreatment

Write the results of the patient's pretreatment sputum smear examination in the **Smear** column of the Tuberculosis Register. This information is available in the patient's Tuberculosis Treatment Card **Smear result** of **Month/0.**

If there are X-ray results which support the diagnosis of tuberculosis, incorporate them in the **Remarks** column.

Verify that all patients are registered in the Tuberculosis Register

Sometimes you might find that there are patients who **have not been registered** in the Tuberculosis Register. These are patients who:

1. have been entered in the Tuberculosis Laboratory Register as smear-positive but are not receiving treatment, or
2. are receiving treatment and have a Tuberculosis Treatment Card.

The first type of patients are critical to trace because in spite of their being sputum smear-positive they are not receiving treatment for tuberculosis. At least half of the smear-positive patients, if left untreated, die from tuberculosis. These patients also spread the infection to their own family members and other members of the community. These patients must be placed on the appropriate treatment regimen *as soon as possible* after being retrieved.

The microscopy centre maintains a Tuberculosis Laboratory Register. During visits to the microscopy centre, identify any smear-positive patients who are entered in the Tuberculosis Laboratory Register but who are not registered in the Tuberculosis Register. In the **Remarks** column of this register, it should be noted if a smear-positive patient has not started treatment, and reason for this should be indicated. During supervisory visits, the STS and STLS should identify all such patients and make all efforts to have them placed on treatment. The Quarterly Report on Programme Management collects information on the number of such patients.

Although the second type of patients are receiving treatment (these patients have a Tuberculosis Treatment Card), they still need to be registered in the Tuberculosis Register so that you can quickly observe whether their treatment is effective and evaluate their treatment outcome.

During supervisory visits to the hospitals and heath units, identify any patients with Tuberculosis Treatment Cards who are not registered in the Tuberculosis Register.

Ensure that all pulmonary smear-positive patients are registered

The Tuberculosis Laboratory Register is used to record the results of sputum smear examinations. The laboratory technician assigns a Laboratory Serial Number for each patient whose sputum smear is examined. If the patient is a chest symptomatic being evaluated, the laboratory technician ticks the **Diagnosis** column under **Reason for Examination** section of the Tuberculosis Laboratory Register. If the patient is already on chemotherapy, the laboratory technician writes the patient's Tuberculosis Number (from the Laboratory Form for Sputum Examination) in the **Follow-up** column under **Reason for Examination** section.

When you visit microscopy centres, make sure that all smear-positive patients are started on treatment. If any smear-positive patient has *not* been placed on treatment, make sure he is found, placed on treatment immediately, and registered in the Tuberculosis Register. If the patient lives outside the sub-district, a copy of the Laboratory Form for Sputum Examination with the result written on it must be sent to the area where the patient will begin treatment. The Laboratory Form for Sputum Examination should indicate 'Patient not registered. Please register patient.' A copy of the Laboratory Form for Sputum Examination should be maintained on file until receipt of intimation from the district to which the patient was referred. Information regarding transfer of patient should be noted in the **Remarks** column of the Tuberculosis Laboratory Register. Clearly indicate whether the patient is being transferred to another sub-district within your district, or to a facility outside your district.

Ensure that all patients with Tuberculosis Treatment Cards are registered

During supervisory visits to hospitals and health centres, verify that each patient with a Tuberculosis Treatment Card is also registered in the Tuberculosis Register. Since you are not always available to register patients every day, it is quite possible that some of the patients in the health unit have begun treatment but are not registered. This is important in order to verify that patients with smear-negative and extra-pulmonary TB have been registered, since these patients cannot be identified by reviewing patients with positive smears in the Tuberculosis Laboratory Register.

Look through all the Tuberculosis Treatment Cards at the health unit. If you see a card ***without a Tuberculosis Number***, ensure that this patient is registered in the Tuberculosis Register. Use the information provided in the patient's Tuberculosis Treatment Card to complete all columns of the Tuberculosis Register up to the **Pretreatment/Smear** column. Record the patient's Tuberculosis Number in the appropriate space on his Tuberculosis Treatment Card.

The patient will be evaluated in the quarter he has been registered, not in the quarter he began treatment. ***It is essential that patients are registered promptly after the treatment begins, and in no case more than one month after the treatment is started.***

Identify pulmonary cases whose sputum smear examination results should be recorded

You should verify the results of sputum smear examinations during your supervisory visits to treatment units. Before going on a supervisory visit to a treatment unit, review the Tuberculosis Register to identify cases who should have had their sputum examined.

Turn to the sample of a Tuberculosis Register. Refer to it throughout the rest of this module.

To review a page of the Tuberculosis Register, perform the following steps:

1. Look at the columns in the **Sputum examination** section for blanks or partially completed information. Then look back across the row to the columns **Name**, **Name of Treatment Centre**, **Date of starting treatment**, and **Regimen/Category.** For cases at the treatment unit you plan to visit, find the date of initiation of their treatment and the treatment regimen.

2. Calculate the approximate date on which their follow-up sputum should have been examined:

   To the date when the treatment started (indicated in the **Date of starting treatment** column of the Tuberculosis Register), add the appropriate number of months. For example, to find the *approximate* date at the end of month 2, when sputum smear examination should have been performed, add 2 months to the date the treatment was started. (Use the table given below to help you remember when pulmonary cases in each treatment category should have a sputum smear examination.)

Schedule of follow-up sputum examinations

Category of treatment	Pre-treatment sputum	Test at month	IF: result is →	THEN:
Category I	+	2	–	Start continuation phase, test sputum again at 4 and 6 months‡
			+	Continue intensive phase for one more month, test sputum again at 3, 5 and 7 months‡
	–	2	–	Start continuation phase, test sputum again at 6 months‡
			+	Continue intensive phase for one more month, test sputum again at 3, 5 and 7 months‡
Category II	+	3	–	Start continuation phase, test sputum again at 5 and 8 months
			+	Continue intensive phase for one more month, test sputum again at 4, 6 and 9 months
Category III	–	2	–	Start continuation phase, test sputum again at 6 months‡
			+	Re-register the patient and begin Category II treatment‡

‡ Any patient treated with Category I or Category III, who has a positive smear at 5, 6 or 7 months of treatment should be considered a Failure and started on Category II treatment afresh.

3. Compare the approximate date calculated with the current date. If the date you estimated has already passed, then the sputum smear should have been examined. The results of the sputum smear examination should be available on the Tuberculosis Treatment Card at the treatment unit.

4. Look back across the row to the columns **TB No.** and **Name** on the Tuberculosis Register. Make a note of the patient's name and Tuberculosis Number. If you cannot take the Tuberculosis Register with you on a supervisory visit, list on a sheet of paper the names of cases category-wise, their Tuberculosis Numbers and the dates their treatment started.

Also, when you are identifying cases whose sputum smear examination results should be recorded, review the Tuberculosis Register to determine whether the proportion of the **New** and **Relapse pulmonary smear-positive** cases at the treatment unit who have **converted to pulmonary smear-negative** by the end of their intensive phase is adequate (85% or more). Review the Tuberculosis Register in the following manner.

Example:
In Kheonjar District, 220 New smear-positive patients were registered. 190 of these New smear-positive patients converted to smear-negative at the end of 2 months and another 10 converted to smear-negative at the end of 3 months. Therefore, 200 (190 + 10) New smear-positive cases converted to smear-negative at the end of 3 months. Divide 200 by the number of cases registered (220) and multiply by 100 to give the conversion rate: 200/220 x 100 = 91%. The conversion rate of New smear-positive patients in this case is 91%.

Record results of sputum smear examinations

Check the patients' records kept at the treatment unit

During your supervisory visit to a treatment unit, check follow-up sputum smear examination results in the Tuberculosis Register. The Tuberculosis Treatment Card and the Laboratory Form for Sputum Examination are the forms you will usually use to obtain information about sputum smear

examination results. Both of these forms should be kept at the treatment unit.

When a patient gets a sputum smear examination, a copy of the Laboratory Form for Sputum Examination with the **Results** section completed should be sent to the treatment unit by the local laboratory. On the Laboratory Form for Sputum Examination, the result(s) of the sputum smear examination(s) are written on the lower half of the form. Health workers at the treatment unit record the results on the patient's Tuberculosis Treatment Card in the column **Smear result**.

Find the Tuberculosis Treatment Card (or the Laboratory Form for Sputum Examination) for each patient whose sputum smear examination results should be transferred to the Tuberculosis Register. Match the name and Tuberculosis Number on the Tuberculosis Treatment Card (or Laboratory Form for Sputum Examination) with the name and Tuberculosis Number on the Tuberculosis Register. The name and Tuberculosis Number are located at the top both in the Tuberculosis Treatment Card and the Laboratory Form for Sputum Examination.

1. **Record results of sputum smear examinations performed at the end of the intensive phase.**
   Record the results of sputum smear examinations performed at the end of the intensive phase. If the results are **smear-negative** at the end of the intensive phase, write **NEG** in the **smear** column and the laboratory number in the **Lab No.** column of **End of I.P.** section.

   If the results were **smear-positive**, draw a forward slash (/) in the space in the **Smear** column. Then write the highest number associated with the positive results (3+, 2+, 1+, or Scanty) in **red ink** above the forward slash. Similarly in the **Lab. No.** column draw a forward slash and enter the Laboratory Number above the forward slash.

   The patient should, however, continue with the intensive phase of drug treatment for another month. The Laboratory Number, and the result of the sputum smear examination done at the end of 3 months should be written in the appropriate columns below the slash you have drawn. For patients under Category II, this procedure would be followed for month 3. If the smear is positive at month 3, the intensive phase would be

continued for another month, sputum examination performed at month 4 and its results would be written under the slash.

End of I.P.*	
Smear	**Lab No.**
1+ / NEG	174 / 296

2. **Record results of sputum smear examinations performed two months into the continuation phase and at the end of treatment**.
   If after the intensive phase or at completion of treatment, patients produce only saliva, the sample should still be sent to the laboratory to be examined. In the Laboratory Form for Sputum Examination, the box for saliva should be ticked. Record the result in the Tuberculosis Register. In most instances it will be smear-negative (NEG).

Record treatment outcomes

It is your responsibility to ensure that the information on treatment outcome from a patient's Tuberculosis Treatment Card is recorded in the Tuberculosis Register.

Tuberculosis Treatment Cards should be sent to you by the treatment units in your sub-district as cases complete treatment. Regularly review the Tuberculosis Treatment Cards to identify treatment outcomes and verify them from the Tuberculosis Register. In case Tuberculosis Treatment Cards are not sent to you, they may be retrieved from the concerned health facility. In case some information is missing, you should obtain it during your supervisory visits.

There are 6 possible treatment outcomes listed in the Tuberculosis Register in the section **Date when treatment was stopped. Every patient must have one and only one treatment outcome.**

Cured

An initially smear-positive patient who has completed treatment and had negative sputum smears on at least two occasions, one of which was at completion of treatment.

Treatment completed

Sputum smear-positive case who has completed treatment with negative smears at the end of the intensive phase but none at the end of treatment;
Or: Sputum smear-negative patient who has received a full course of treatment and has not become smear-positive during or at the end of treatment;
Or: Extra-pulmonary patient who has received a full course of treatment and has not become smear-positive during or at the end of treatment.

Died

Patient who died during treatment, regardless of cause.

Failure

Smear-positive case who is smear-positive at 5 months or more after starting treatment. Failure also includes a patient who was initially smear-negative but who became smear-positive during treatment.

Defaulted

A patient who, at any time after registration, has not taken anti-TB drugs consecutively for 2 months or more.

Transferred out

A patient who has been transferred to another Tuberculosis Unit/District and his/her treatment results are not known.

The information you need to determine a patient's treatment outcome is present on a completed Tuberculosis Treatment Card. When you receive a completed Tuberculosis Treatment Card, first match the information about the patient on the card with the information on the Tuberculosis Register. Then, carefully review all the information on the Tuberculosis Treatment Card and decide the outcome category to which the patient belongs.

Review the front portion of the Tuberculosis Treatment Card. Determine if the patient was a pulmonary smear-positive, pulmonary smear-negative, or extra-pulmonary case. Determine whether the patient was on CAT I,

CAT II, or CAT III treatment regimen. Also, determine if he had his sputum examined when it should have been examined, and what the results of those examinations were.

Review the back portion of the Tuberculosis Treatment Card. See if the patient collected all his drugs at the correct times. Look at the **Remarks** section for any comments MO or health workers might have written. Use the information on the Tuberculosis Treatment Card and the information on page 11 to identify a patient's treatment outcome. **The MO-TC must verify the treatment outcome of each and every patient, particularly those classified as Cured or Treatment completed.**

Recording the treatment outcome on the Tuberculosis Register and writing any comments you have in the **Remarks** section will complete your monitoring of treatment for an individual patient. Look at the right-hand side of the Tuberculosis Register. The 6 possible treatment outcomes for a tuberculosis patient are listed in 6 separate columns. After you identify a patient's treatment outcome by reviewing his Tuberculosis Treatment Card, write the date the patient stopped treatment in the appropriate column. **The date a patient stopped treatment is the last date he should have taken the drugs he collected in the last week.** The last date a patient collects drugs is marked with an '**X**' on the drug collection chart on the back portion of the Tuberculosis Treatment Card. A horizontal line extends to the last date he should have taken his drugs. **Do not just make a tick mark (✓) in this space, but write the date of treatment outcome, as shown below.**

Date when treatment was stopped

Cured	Treatment completed	Died	Failure	Defaulted	Transferred out
				13/11/96	
14/3/97					
			14/7/97		
18/4/97					

QUARTERLY REPORT ON NEW AND RETREATMENT CASES OF TUBERCULOSIS

In the Quarterly Report on New and Retreatment Cases of Tuberculosis, you record how many tuberculosis cases were diagnosed and registered during a quarter (a 3-month period). This information is compiled at the sub-district level and is derived from the Tuberculosis Register. Reports from all sub-districts are compiled at the district level. These compiled reports are then sent by the District Tuberculosis Officer (DTO) simultaneously to the State Tuberculosis Officer (STO), the Central TB Division (Directorate General of Health Services, Nirman Bhavan, New Delhi 110 011), and the National Tuberculosis Institute (8 Bellary Road, Bangalore 560 003).

Within the first week after a quarter has ended, you should complete the Quarterly Report on New and Retreatment Cases of Tuberculosis and submit it. You should see and carefully review the schedule of reports in Annexure IV for strict compliance.

Refer to the Quarterly Report on New and Retreatment Cases of Tuberculosis now.

The top portion of the form is for recording general information about the quarter covered and your area. It allows the district, state and central levels to quickly determine which sub-district, district, and quarter are reported.

Block 1

Block 1 is subdivided into five columns:

1. Smear-positive New cases of pulmonary tuberculosis
2. Smear-positive Relapses of pulmonary tuberculosis
3. Smear-negative cases of pulmonary tuberculosis
4. Extra-pulmonary cases of tuberculosis
5. Total

Each of the first four columns in Block 1 is subdivided into two columns to record the sex-wise distribution of each type of cases. Column (1) also has additional column for the total number of New pulmonary smear-positive cases. Column (5) is subdivided into three columns to record the total

number of male cases, total number of female cases and overall total number of smear-positive New cases, smear-positive Relapses, smear-negative cases and extra-pulmonary cases of tuberculosis for the quarter. This format is shown below.

Pulmonary tuberculosis							**Extra-pulmonary tuberculosis (4)**		**Total (5)**		
Smear-positive					**Smear-negative (3)**						
New cases (1)			**Relapses (2)**								
M	**F**	**Total**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**Total**

You will notice that at the bottom of the right side of each left sided page of the register there is a tally box which will help you complete this block.

1. Count the number of male pulmonary smear-positive New cases

a. Look at the columns **Sex (M/F), Disease Class (P/EP), Type of Patient (New, Relapse, Transfer in, Failure, Treatment After Default, Other),** and **Pretreatment** on the Tuberculosis Register. Use a sheet of paper to cover the rows. Move the paper down slowly, one row at a time. Count the number of **male smear-positive New cases**, putting a mark next to each patient counted. That is, look for:
M in the column **Sex**
P in the column **Disease class**
N in the column **Type of Patient (New)**
1+, 2+, 3+, or Scanty in the column **Pretreatment**.
b. Enter the total number (in pencil) at the bottom of the Tuberculosis Register.
c. Re-count to make sure that the number obtained is correct.
d. Add together the numbers of **male smear-positive New cases** from the bottom of each page of the Tuberculosis Register you review.

e. Enter the number of **male smear-positive New cases** in the appropriate column. Find Block 1. In Block 1, find the section **Pulmonary tuberculosis smear-positive.** Locate **M** in the column **New cases (1)** of this section and enter the number.

2. Count the number of female pulmonary smear-positive New cases

To count the number of **female pulmonary smear-positive New cases**, repeat the same procedure as described above for male pulmonary smear-positive New cases with the exception that in the column **Sex** look for **F**. Enter the number you obtain for the total number of female smear-positive New cases under **F** in the column **New cases (1)** of Block 1.

3. Determine the total number of smear-positive New cases of pulmonary tuberculosis

Add the number of male and female pulmonary smear-positive New cases and enter the number obtained under the heading **Total** in the column **New cases (1)** of Block 1.

Block 2

In Block 2, the data on *New pulmonary smear-positive cases* are recorded on the basis of sex and age groupings. The age groupings used in Block 2 are internationally recognized. When the report is completed, verify that the **Total** in Block 2 corresponds to the total number in Block 1 under the column **New cases (1)/Total**. Remember, only New smear-positive patients should be included in Block 2. The total numbers of smear-positive males and smear-positive females must match those in the column **M** and **F** of **New Cases (1)** of **Block 1**.

Block 3

Block 3 of this report is essential for calculating total case-detection rate and for monitoring drug consumption. Every patient started on treatment must be recorded in the Tuberculosis Register, and every patient in the Tuberculosis Register must be included in the **Total** column for Block 3. Note that certain boxes in Block 3 are shaded out. This is because, if patients are correctly categorized, there will be none in these boxes. For example, there should never be a patient who fits into the definition for Relapse, Failure or Treatment After Default receiving CAT I or CAT III

treatment. Only smear-positive patients fit into the definitions of Relapse, Failure and Treatment after Default. In very rare circumstances, patients with extra-pulmonary or smear-negative tuberculosis might otherwise be considered a Relapse, Failure or Treatment after Default case. However, all such cases should be classified as 'Other'. If there is a patient in your Tuberculosis Register who falls into one of these boxes, review and correct the information regarding this patient. **All patients started on treatment must be included in Block 3; if necessary 'Type of Patient' can be 'Others'.**

EXERCISE 1

Using the five pages of the Tuberculosis Register in the Exercise Workbook, complete all the three blocks of the Quarterly Report on New and Retreatment Cases of Tuberculosis on page 19. Use the box at the bottom of the Tuberculosis Register for Block 1, and the worksheets provided for Block 2 (see below) and Block 3 (see page 18).

REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME

WORKSHEET

Quarterly Report on New and Retreatment Cases of Tuberculosis

Block 2: New smear-positive cases only

Review every page of the Tuberculosis Register for the quarter being reported on. Put a tally mark* (/) on the appropriate column below, and give the totals in the space provided. Include **only** patients who are New sputum smear-positive pulmonary cases (Category I, sputum-positive).

Age (years)	Male (tally here)	Male total	Female (tally here)	Female total
0–14				
15–24				
25–34				
35–44				
45–54				
55–64				
65 and above				
Total				

* One tally mark (/) is put for every case. If four cases are recorded, four tally marks are placed (////). However, when a fifth case is recorded the four tally marks already put in are crossed (~~////~~). In this way each group represents five cases. This method of tally-marking facilitates counting.

REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME

WORKSHEET

Quarterly Report on New and Retreatment Cases of Tuberculosis

Block 3: All patients started on treatment

Review every page of the Tuberculosis Register for the quarter being reported on. Put a tally mark* (/) on the appropriate column below, and give the totals in the space provided. **Every patient started on treatment must be entered in this report.**

Type of patient	Category I		Category II		Category III		Total
	smear-positive	smear-negative/ extra-pulmonary	smear-positive	smear-negative	smear-negative	extra-pulmonary	
New							
Relapse							
Failure							
Treatment After Default							
Others							
Total							

* One tally mark (/) is put for every case. If four cases are recorded, four tally marks are placed (////). However, when a fifth case is recorded the four tally marks already put in are crossed (~~////~~). In this way each group represents five cases. This method of tally-marking facilitates counting.

REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME

Quarterly Report on New and Retreatment Cases of Tuberculosis

Patients registered during _____ quarter* of 19_____

Name of area _____No.#_____

Name of Reporter:_____

Signature:_____

Date of completion of this form

				1	9		
d	d	m	m				

Block 1: All patients registered in the quarter

Pulmonary tuberculosis							Extra-pulmonary tuberculosis (4)		Total (5)		
Smear-positive					Smear-negative (3)						
New cases (1)			Relapses (2)								
M	F	Total	M	F	M	F	M	F	M	F	Total

Block 2: Smear-positive New cases only: from Column (1) above

Age-group (years)														Total		
0–14		15–24		25–34		35–44		45–54		55–64		65 and above				
M	F	M	F	M	F	M	F	M	F	M	F	M	F	M	F	Total

Block 3: All patients started on treatment

Type of patient	Category I		Category II		Category III		Total
	smear-positive	smear-negative extra-pulmonary	smear-positive	smear-negative	smear-negative	extra-pulmonary	
New							
Relapses							
Failures							
Treatment After Default							
Others							
Total							

Notes: *Quarters: 1st quarter January, February, March
2nd quarter April, May, June
3rd quarter July, August, September
4th quarter October, November, December

#Number Identification number of the area

12/97

QUARTERLY REPORT ON SPUTUM CONVERSION OF NEW CASES, RELAPSES AND FAILURES

The Quarterly Report on Sputum Conversion of New (sputum-positive) cases, Relapses and Failures is a critical *early indicator* of the effectiveness of programme implementation. Obtaining sputum and ensuring its examination at the end of the intensive phase is of critical importance for several reasons:

- Patients whose sputum are found to be smear-positive will receive another month of intensive phase of treatment, improving their chances for cure;
- Documentation that patients are converting from smear-positive to smear-negative gives patients and health workers confidence in the RNTCP;
- Gives confidence to the patient and the health worker that the patient is no longer infective and hence does not pose any danger to his family and the community.
- Sputum conversion is an early and sensitive indicator of the quality of programme implementation. A low conversion rate indicates a need for intensive supervision, and a high conversion rate indicates that the area could be used as a field demonstration area.

To calculate sputum conversion rates, all smear-positive New, Relapse and Failure patients begun on treatment during the identified period are included in the denominator, even if they have died, defaulted, been transferred to another state, or not had sputum collected. The number of patients with documented negative smears at the end of 2(3) months is divided by the number of smear-positive patients started on treatment, and the result is multiplied by 100.

Although sputum conversion rates are determined for three different types of patients, by far the most important to evaluate are those of New sputum smear-positive patients. At least 90% of New smear-positive patients put on CAT I treatment should have sputum conversion to smear-negative by the end of 3 months of treatment.

EXERCISE 2

In one sub-district, the number of New smear-positive patients starting CAT I treatment was 88. After two months, 61 patients had negative sputum smears, 4 were smear-positive, and 23 did not have their sputum smear examination done. After three months, 4 patients had sputum examined and all were smear-negative.

1. What is the sputum conversion rate at the end of 2 months?
2. What is the sputum conversion rate at the end of 3 months?
3. What was the number of patients who did not have sputum smear examinations done at the end of 2 and 3 months, and what are the possible reasons for this?

Use the format below:

Total number of New sputum-positive patients	**Sputum at 2 months**			**Sputum at 3 months**		
	Negative	**Positive**	**N.A.**	**Negative**	**Positive**	**N.A.**

N.A.—Not available. Sputum examination was not done.

EXERCISE 3

Complete the Quarterly Report on Sputum Conversion of New Cases, Relapses and Failures on page 23, using the five pages of the Tuberculosis Register in the Exercise Workbook. Use the worksheet provided below.

REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME

WORKSHEET

Quarterly Report on Sputum Conversion of New Cases, Relapses and Failures

Review every page of the Tuberculosis Register for the quarter being reported on. Make sure all available sputum results have been entered into the register. Put a tally mark* (/) on the appropriate column below, and give the totals in the space provided. **Every sputum-positive new, relapse and failure patient begun on treatment must be entered into this report**. Only patients with pulmonary sputum positive tuberculosis are included in this report.

Total number of new sputum-positive patients	Sputum at 2 months			Sputum at 3 months		
	Negative	Positive	N.A.	Negative	Positive	N.A.
Total						

Total number of smear-positive relapse patients	Sputum at 3 months		
	Negative	Positive	N.A.
Total			

Total number of smear-positive failure patients	Sputum at 3 months		
	Negative	Positive	N.A.
Total			

N.A.—Not available; sputum examination was not done.

* One tally mark (/) is put for every case. If four cases are recorded, four tally marks are placed (////). However, when a fifth case is recorded the four tally marks already put in are crossed (~~////~~). In this way each group represents five cases. This method of tally-marking facilitates counting.

REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME

Quarterly Report of Sputum Conversion of New Cases, Relapses and Failures

Patients registered during

_____ quarter of 19_____

Name of area: _____

No._____

Name of Reporter: _____ Signature: _____

Date of completion of this form:

				1	9		
d	d	m	m				

Complete this proforma for sputum smear-positive patients. The total number should be the same as in the Quarterly Report on New and Retreatment Cases of Tuberculosis.

Total number of new sputum-positive patients	Sputum at 2 months			Sputum at 3 months		
	Negative	Positive	N.A.	Negative	Positive	N.A.

Total number of smear-positive relapse patients	Sputum at 3 months		
	Negative	Positive	N.A.

Total number of smear-positive failure patients	Sputum at 3 months		
	Negative	Positive	N.A.

N.A. – Not available; sputum examination was not done.

QUARTERLY REPORT ON THE RESULTS OF TREATMENT OF TUBERCULOSIS PATIENTS REGISTERED 12–15 MONTHS EARLIER

The primary goal of the RNTCP is to diagnose and cure patients with tuberculosis, especially patients with smear-positive tuberculosis. Think of the patients you register in a quarter as a group of individuals who start out together in a 10 kilometre foot race. At the end of the race, the judges count how many people in the group completed the race within a certain time period, how many people completed the race at all, and how many people did not complete the race. Similarly, at the end of treatment, you should count how many New smear-positive cases you registered in a specific quarter were cured, completed treatment, died, were treatment failures, defaulted or were transferred out.

Similarly, smear-positive retreatment cases are evaluated. (Smear-negative pulmonary cases are evaluated separately. Successfully treated smear-negative cases are classified as 'Treatment completed'.)

You should use the findings of reports on treatment results to help you supervise health workers and monitor the programme. Sharing the results of reports with health workers can help them understand how their efforts have improved the cure rate. If the cure rate of 85% has been achieved, it will make them proud of the work they have done and hence motivate them to maintain it. If the desired cure rate has not been achieved in certain areas, sharing of information of successful areas with them will help them to learn the ways and means for improving their performance.

At the beginning of each quarter, complete the Quarterly Report on the Results of Treatment of Tuberculosis Patients Registered 12–15 Months Earlier. It summarizes the treatment outcomes of patients on short-course chemotherapy who were registered in the Tuberculosis Register 12–15 months earlier. It is the most important report in the routine reporting system of tuberculosis cases and their outcomes. Please review the following example of evaluation of treatment outcomes and rates.

Example:
During the first quarter of 2000 in one sub-district, 134 New smear-positive patients were started on treatment. At the beginning of the

second quarter of 2001 (1 April 2001), the Senior Treatment Supervisor (STS) ensured that all information in the Tuberculosis Register was complete and accurate for every patient registered in the first quarter of 2000. He confirmed that the Quarterly Report on New and Retreatment Cases of Tuberculosis sent one year before, on patients diagnosed in this quarter, reported 134 New smear-positive patients. Using the worksheets, he then tallied the result and found that:

Patients reported during quarter	**Type of patient**	**Cured (1)**	**Treat-ment completed (2)**	**Died (3)**	**Failure (4)**	**Defaulted (5)**	**Transferred to another district (6)**	**Total number eval-uated (sum of columns 1 to 6)**
134	*New smear-positive*	*110*	*4*	*4*	*2*	*9*	*5*	*134*

The rates are calculated as follows:

Cure rate: (110 ÷ 134) X 100 = 82%
Completion rate: (4 ÷ 134) X 100 = 3%
Death rate: (4 ÷ 134) X 100 = 3%
Failure rate: (2 ÷ 134) X 100 = 1%
Default rate: (9 ÷ 134) X 100 = 7%
Transfer rate: (5 ÷ 134) X 100 = 4%

In this example, results could be improved to meet the goal of 85% cure by:

- ensuring that every patient who completes treatment has at least two sputum smear examinations done during the course of treatment, including one at the end of treatment,
- reducing the default rate,
- reducing the transfer rate,
- obtaining information on patients who were transferred and who were cured (if any),
- a combination of these four interventions.

Note that the outcome must be reported on each and every patient who is registered.

EXERCISE 4

Complete the Quarterly Report on the Results of Treatment of Tuberculosis Patients Registered 12–15 Months Earlier (see below) for the five pages of the Tuberculosis Register in the Exercise Workbook.

REVISED NATIONAL TUBERCULOSIS CONTROL PROGRAMME

Quarterly Report on the Results of Treatment of Tuberculosis Patients Registered 12–15 Months Earlier

Name of area:_____ No: _____ Date of completion of this form _____ 19 ____	Patients registered during _____ quarter of 19 ____	Name of Reporter*: _____ Signature: _____

Patients reported during quarter**	Type of patient	Cured (1)	Treatment completed (2)	Died (3)	Failure (4)	Defaulted (5)	Transferred to another district (6)	Total number evaluated (sum of columns 1 to 6)
	NEW CASES Smear-positive							
	Smear-negative							
	Extra-pulmonary							
	Total							
	RETREATMENT CASES Smear-positive relapses							
	Smear-positive failures							
	Smear-positive Treatment After Default							
	Others treated with Category II							
	Total Category II							

* The Reporter is the Medical Officer responsible, not the person completing this form. This form includes patients on Category I, Category II and Category III treatment, both smear-positive and smear-negative. These totals should match those of the Quarterly Report on New and Retreatment cases for the quarter.

** Of these, _____ (number) were excluded from evaluation of chemotherapy for the following reasons:

EXERCISE 5

Refer to the Exercise Workbook. Study the section 'Tuberculosis Register with Errors'. Identify at least one error on each line of the Tuberculosis Register.

TB No.	Errors identified
401	
402	
403	
404	
405	
406	
407	
408	
409	
410	

QUARTERLY REPORTS ON PROGRAMME MANAGEMENT AND LOGISTICS

The Quarterly Reports on Programme Management and Logistics allow monitoring of the essential programme activities necessary for the success of the RNTCP. Every month, each Peripheral Health Institution (PHI) completes a report and sends it to the Tuberculosis Unit (TU). Each TU compiles this report every quarter. Each District Tuberculosis Centre (DTC) compiles a consolidated report on the basis of reports received from all TUs in the district. The State Tuberculosis Headquarters completes this report every quarter on the basis of reports received from all the districts where RNTCP is in operation in the state. Reports from the district and state levels are sent to the Central TB Division. PHI and TU level reports are retained at the DTC.

The DTC serves as a TU for the area in its immediate surroundings. The DTC will complete a Sub-district Level report for that TU, and then combine the results of that report with the results of reports from all other TUs to create the District Level report. Training activities included in the State Level report relate only to training done at the state level at the State TB Training and Demonstration Centre or other institutions undertaken by the State Tuberculosis Headquarters.

In order to ensure that there is no shortage of drugs, a 3-month reserve stock of drugs is kept at the DTC and at each TU, and a 1-month reserve stock is kept at each PHI.

PHI Level—Monthly Report on Logistics and Microscopy

PHIs which are not performing microscopy activity complete only the first page of this report. Microscopy centres complete both the first and the second pages of this report.

The first section of this report, on **Medications**, tallies stock at the beginning of the month, stock received during the month, stock consumed during the month, and stock on the last day of the month. From these figures and the expected caseload (based on the previous period), the requirements for each item are estimated.

Example:
In one PHI, in the previous month, 3 patients were started on CAT I treatment, 1 patient was started on CAT II treatment, and 3 patients were started on CAT III treatment. An example of this part of the report is reproduced below.

Medications

Item	Stock on first day of month	Stock received during month	Patients started on treatment during month	Stock on last day of month	Quantity requested
Category I patient-wise box	4	2	3	3	1
Category II patient-wise box	1	1	1	1	0
Category III patient-wise box	3	2	3	2	1

In the same manner, pouches that would be required in case of prolongation of the intensive phase and individual drugs are requested.

Staff Position and Training

This report collects information on sanctioned staff, staff in place, and staff who have been trained in the RNTCP. Since staff turnover is common, this information is important for the tuberculosis control staff to plan re-training, and, in case of vacancies, shifting of services if necessary.

Example:

Staff Position and Training

Category of staff	Sanctioned	In place	Trained in RNTCP
Medical Officer	3	2	2
Laboratory Technician	10	1	1
Pharmacist	1	1	1
Multi-purpose Health Worker	8	6	0
Other	1	1	0

From this information, it can be seen that in addition to filling up the vacant posts there is a need to train 2 multi-purpose health workers in the RNTCP at this PHI.

Consumables

Laboratory consumables will be requested in the same manner as medications. Stains should be prepared at the DTC on a monthly basis and provided to TUs, which should ensure adequate supply at each microscopy centre every month. If particles have formed in carbol fuchsin, the carbol fuchsin solution should be re-filtered.

Sputum containers as well as Laboratory Forms for Sputum Examination should be supplied to each and every PHI in the sub-district, so that they can collect sputum from symptomatic patients as well as follow-up samples from patients undergoing treatment for tuberculosis. Supply will be made available to the microscopy centres from either the DTC or the TU. Other PHIs shall collect containers and forms from the microscopy centres when they bring sputum samples to be tested, or during regular meetings.

Microscopy Activities

This section is essential to evaluate microscopy activities (number of patients whose sputum was examined by microscopy) and microscopy yield (number of smear-positive patients diagnosed). This enables you to determine whether 2% of new adult outpatients are being examined as per policy.

Example:

An example, again using PHI 237, is given below:

Microscopy Activities

(a) Number of new adult outpatient visits in health facilities	2514
(b) Out of (a), number of chest symptomatic **patients** whose sputum was examined for diagnosis	58
(c) Out of (b), number of smear-positive **patients** diagnosed	6

Treatment Initiation

Information on treatment initiation is an essential part of the programme management report. This is the only form in which information on initial defaulters (patients who were found to be smear-positive, but were not started on treatment) is collected.

Example:

Treatment Initiation

(d) Of the number of smear-positive patients diagnosed (c), the number who reside within the district	5
(e) Of the smear-positive patients diagnosed who reside within the district (d), number put on DOTS	4
(f) Of the number of smear-positive patients diagnosed who reside within the district (d), number put on treatment other than DOTS	0
(g) Initial defaulters among smear-positive patients diagnosed and residing within the district (g = d – e – f)	1

From this information, it can be seen that in addition to filling up the vacant posts there is a need to train 2 multi-purpose health workers and one pharmacist in the RNTCP at this PHI.

Not all the patients who are diagnosed smear-positive are put on treatment at PHI 237. For some, treatment will begin in other PHIs which are not microscopy centres. The information on whether and where patients have begun treatment should be collected at regular meetings, or may be collected by the STS or the STLS when they supervise the PHIs.

Only information on the **number of patients**, and not on the number of slides examined, is collected. Information on sputum smear examinations done for diagnosis, and not on sputum smear examinations done for follow-up of TB patients already begun on treatment, is collected.

Equipment

Every month, each microscopy centre reports on the condition of its microscope. If a microscope is not working, it should be repaired promptly. If it is under warranty, the supplier must do this free of charge. If the warranty has expired, funds from the district society should be used for repairs which should be undertaken promptly. However, only a licensed and reputed repair agent should be hired.

Name and Signature

The name and signature of the reporting officer is given. This should generally be the MO who has been designated as being in-charge of tuberculosis work at the PHI.

Name of officer reporting (in Capital Letters): _____

Signature: _____ Date: _____

Tuberculosis Unit (TU) Level—Quarterly Report on Programme Management and Logistics

All the information collected at the different PHI levels is incorporated into the TU Level report. In addition, the TU Level report includes information on supervisory activities including information on supervision of microscopy activities and training activities.

Supervisory Activities

This information is self-explanatory. The stipulated supervisory schedule is given in the Operational Guidelines.

Microscopy Activities

This information is the same as that given in the PHI Level report. **The figures given here must include all microscopy centres, including the microscopy centre of the TU.**

Treatment Initiation

One of the key responsibilities of the STS is to ensure that every smear-positive patient who is diagnosed is either put on treatment, or is properly transferred to another area where the patient resides and will receive treatment there. This information comes from the PHI Level reports.

Example:

At all the microscopy centres in one TU during one quarter, the details regarding microscopy and treatment were as follows:

Microscopy Activities

(a) Number of new adult outpatient visits in health facilities	94,338
(b) Out of (a), number of chest symptomatic **patients** whose sputum was examined for diagnosis	3500
(c) Out of (b), number of smear-positive **patients** diagnosed	398

Treatment Initiation

(d) Of the number of smear-positive patients diagnosed (c), the number who reside within the district	378
(e) Of the smear-positive patients diagnosed who reside within the district (d), number put on DOTS	358
(f) Of the number of smear-positive patients diagnosed who reside within the district (d), number put on treatment other than DOTS	14
(g) Initial defaulters among smear-positive patients diagnosed and residing within the district (g = d – e – f)	6

In the above example, there were 20 patients who were diagnosed as having smear-positive TB but who lived outside the district. To complete this report, it will be necessary for the staff of all the TUs in a district to interact regarding these specific 20 patients who might have been transferred out to any of the TUs within the district.

Laboratory Quality Control Network

A network of quality control is essential for the success of the RNTCP. Every month, each STLS must visit each microscopy centre and review all smear-positive slides and at least 10% of smear-negative slides.

Staff Position and Training

The format of this section is the same as that of the PHI Level report. At the TU level, information from all PHIs in the sub-district is given. Information on the TU level staff specifically is given in the first part of this section, and is reproduced below.

Staff Position and Training
(Tick [✓] if in place or not during quarter)

Designated Medical Officer-TB	❑ Yes	❑ No	Trained in RNTCP	❑ Yes	❑ No
Senior Treatment Supervisor (STS)	❑ Yes	❑ No	Trained in RNTCP	❑ Yes	❑ No
Senior Tuberculosis Laboratory Supervisor (STLS)	❑ Yes	❑ No	Trained in RNTCP	❑ Yes	❑ No

The sections on **Medications**, **Consumables**, **Equipment**, and **Signature** are in the same format as that of the PHI Level report. These sections must include all PHIs in the area of the TU, as well as the TU itself.

Staff of the TU may find it helpful to complete a PHI Level report for the specific institution where the TU is located, and then combine this information with information from all PHIs in the TU area.

DISTRIBUTE THE DRUG SUPPLY TO THE HEALTH UNITS

After you receive the supply of drugs for the quarter, distribute the drugs to the health units in the sub-district (district hospital, health centres, dispensaries and health units). Drugs should be distributed according to the number of patients treated at the health unit during the last quarter. To determine how many patient-wise boxes, pouches in case of prolongation of the intensive phase, and loose drugs are required to be distributed to each health unit in your sub-district apply the same procedure that was used to determine the amount of drugs needed in the sub-district. Follow the steps given.

1. Determine the number of tuberculosis patients treated at the health unit last quarter

Refer to the Tuberculosis Register to determine the number of tuberculosis patients treated at the health unit during the last quarter for each category of treatment regimen.

a. Find the pages in the Tuberculosis Register for the quarter which just ended. For example, if it is 5 April, find the pages for the 1st quarter (1 January to 31 March).
b. Look down the **Name of Treatment Centre** column for the health unit to which you will distribute drugs. Then look across to the **Regimen/Category** column. Record on a sheet of paper or at the bottom of page the number of patients who have been treated during the quarter at the health unit in different categories viz. CAT I, CAT II, or CAT III. If you use a sheet of paper, draw a chart category-wise and use tally marks for counting. See the chart that follows for an example of how one would look for this information.
c. Continue to record the number of patients of each category until you have gone through all the appropriate pages of the Tuberculosis Register during the last quarter for that health unit.

Example:

In this example, the STS reviewed 4 pages in the Tuberculosis Register for the third quarter of 1999. He recorded the number of patients prescribed to each treatment regimen for 6 health units in the sub-district.

Category	Maharishi Dispensary	Modern Health Centre	Popular Health Care Unit	Sankara District Hospital	Easwari Health Centre	Best Care Health Centre
I	5	3	4	2	18	3
II	1		1		6	
III	2	1	1	1	9	1

2. Determine the loose drugs and the approximate number of pouches that would be required in case of prolongation of the intensive phase.

The number of pouches required in case of prolongation of the intensive phase can be estimated by counting the number of CAT I and CAT II patients with positive AFB smears at the end of 2 and 3 months, respectively. For loose drugs, these quantities can be estimated by counting the number of cases in children and multiplying by the number of pills of each type. In addition, a small proportion (1%–2% of all cases) of patients who weigh more than 60 kg would require an extra 150 mg of rifampicin for the full duration of treatment. Loose drugs in dosages appropriate for children must also be provided. Medications of patients who defaulted, died, or were transferred out must be returned to the MO-TC at the TU. The MO-TC should personally reconstitute these as complete patient-wise boxes and then distribute them for use.

3. Allow for 1 month of reserve stock at the health unit.

4. Account for drugs currently in stock at the health unit.

Make sure there is an adequate stock of drugs at all health units

When you go on supervisory visits to a health unit, make sure there is an adequate supply of drugs to meet the requirements of the facility. Check the drugs in stock to see if there are sufficient drugs to last until the end of the quarter, including adequate reserve stock. Enquire from the staff if they think the supply is adequate. Based on the amount of drugs used so far in

the quarter, assess if the supply is sufficient. For example, if you visit a health unit when half of the quarter is over and they have used three quarters of their drug supply, the supply will probably **not** last until the end of the quarter. In such cases, their drug supply should be supplemented immediately.

If a health unit is treating substantially higher number of cases than usual, consider bringing them more stock of drugs. In such a situation, be sure to check the records for possible reasons for the increased use of drugs. If you cannot find a reason for the increase, rule out any possibility of misuse of drugs. If you determine that a health unit will definitely need more drugs *for treatment* (not for stock) before the end of the quarter, give them the necessary amount of drugs if you have a sufficient amount. If you do not have an adequate supply of drugs with you, check your reserve stock when you return to see if it will meet the increased need and distribute the drugs as quickly as possible. (*Note*: The district drug store **must** have an adequate reserve stock to use for these emergencies.) If the reserve stock is not sufficient, order the drugs needed and distribute them as quickly as possible.

If a health unit has too large a stock of drugs, take the excess stock back to the drug store and add the number of drugs to your records. Or, you can keep the extra drugs at the health unit itself, but deduct the excess amount from the amount you would distribute to them the following quarter.

Never stock drugs beyond date of expiry

To ensure that there is no stocking of drugs beyond their date of expiry, tell the health workers to use the old stock of drugs before the new stock. The principle of First-Expired, First-Out (FEFO) must be regularly followed. Show the health workers how to find the date of expiry printed on the packing of drugs. Remind them that when they store new supplies of drugs, they should place the new patient-wise boxes and drugs behind the old patient-wise boxes and drugs on the shelf. When you visit health units, check the date of expiry to verify that the older drugs are being used first and that none of the drugs are past their date of expiry. Drugs that are past their date of expiry should never be stored with the drugs which are being used.

CONDUCT SUPERVISORY VISITS

Many activities are required to diagnose and cure tuberculosis patients in your area. You cannot perform all these activities by yourself. You need the cooperation of workers in health units and microscopy centres in the sub-district.

During your regular supervisory visits place the emphasis on *helping* staff in identifying and solving their problems. This will create a good working relationship between you and the staff of the sub-district. Staff will be less worried about you finding things 'wrong', and may be more willing to discuss problems with you to identify solutions. You should try to become their educator, coordinator, facilitator, motivator and guide.

Supervisory visits give staff the opportunity to talk with you. It gives you the opportunity to see and better understand the problems staff face, especially workers at peripheral health facilities. The interest you show during these visits can motivate people to perform their best. When you find that certain problems cannot be resolved by you, talk with your supervisors.

Good supervision is the process of helping staff improve their performance. During these visits you can observe and reinforce correct and good performance. You can also identify and correct the deficiencies in the performance before they become a major problem. Your sub-district is more likely to successfully manage tuberculosis patients when you are supervising effectively and workers are performing activities correctly. In this section, you will learn how to prepare for and conduct supervisory visits to health units in your sub-district.

Prepare for supervisory visits to health units

To use your time productively and efficiently during a supervisory visit to a health unit, you will need to prepare well in advance for the visit. You will need to decide on the **frequency** of visits to the health units in your sub-district, **what** to look for to determine if staff are doing a good job in providing health services for case-detection and treatment of tuberculosis, and **when** and **how** to collect the information you need.

Decide the frequency of visits to health units

Health units may include hospitals, health centres and dispensaries. On a regular basis, schedule supervisory visits to all health units in your sub-district. Any health unit which is not placing 90% or more of smear-positive patients on RNTCP treatment, is achieving a conversion rate of New smear-positive cases of less than 85%, is curing less than 80% of cases, or has a default rate of more than 10% should be *closely supervised.*

Plan frequent visits to the health units. You should interview MPHS and MPW at PHCs and sub-centres, inspect records and Tuberculosis Treatment Cards, and interview randomly selected patients. You must visit each PHC and CHC every month, and sub-centres every quarter. Write the days you plan to visit each health unit on your calendar. Notify the supervisor of the health units about your proposed visit well in advance. Plan and spend enough time at each health unit so that you can do an effective supervision. Try not to rush through your visit. After the visit, send your report to the concerned unit.

Decide how to check each item at health units

There are several ways to collect information during a supervisory visit. Before undertaking the supervisory visit, examine the Tuberculosis Register for getting the latest information in respect of the facility. This will help you prioritize the areas you should check. Taking into consideration the time available with you and the areas you want to check during the visit decide the best methods to collect the information you want. Some of these methods are:

1. Talk with health workers

Talk with health workers to learn what they know and what they think about their work. For example, ask them under what circumstances they would label a person as chest symptomatic and advice him sputum examination. It can also be enquired from them as to what do they do when a patient's Laboratory Form for Sputum Examination comes to them from the laboratory. If certain weak areas in their performance are noticed, it is better to talk with them in private on these issues and try to solve the problem together. Also, compliment them on the work they have done well.

2. Review Tuberculosis Treatment Cards

Tuberculosis Treatment Cards which have been accurately and completely maintained can tell you about the performance of several related activities. They can tell you:

- if patients who are smear-positive at 2 (3) months are given 1 extra month of the intensive phase of treatment
- if patients are placed on the correct treatment regimen
- if patients are administered drugs on the specified day as per schedule
- if sputum specimens are collected at correct intervals and sputum smear examination results are recorded
- if patient information at the top of the Tuberculosis Treatment Card is complete
- if health workers trace patients who do not collect their drugs and bring them back under treatment
- if New smear-positive cases are placed on the retreatment regimen afresh if they are smear-positive at the end of 5 months
- about efforts that have been made for the retrieval if the patient has defaulted
- about status of screening of family contacts of sputum-positive cases.

Review Tuberculosis Treatment Cards of all the patients in the intensive phase during each visit. When you review the cards, check to make sure that every patient who has a Tuberculosis Treatment Card is entered in the Tuberculosis Register. *When you review the Tuberculosis Treatment Cards, determine whether pulmonary smear-positive patients are converting from smear-positive to smear-negative at the end of 2 (3) months.*

Tuberculosis Treatment Cards also contain information about the treatment of patients. Make sure that patients are coming to swallow every dose of drugs under direct observation of the health worker during the intensive phase. Also, make sure that patients in the continuation phase collect their drugs every week and are observed ingesting the first dose from the weekly blister pack, and that they bring back the previous week's empty blister pack. Compare the amount of drugs consumed from the patient-wise box with the visits shown in the Tuberculosis Treatment Card and investigate discrepancies, if any.

Remember to transfer the latest information from the Tuberculosis Treatment Cards into the Tuberculosis Register (for example, results of sputum smear examinations).

3. Observe health workers

Observe staff doing their work. This will give you the most accurate information about how well they are performing tuberculosis-related activities. For example, in health units which are giving directly observed treatment, watch them administer treatment. Check to see if they administer the correct number and type of drugs. Make sure they watch the patients swallow the pills and that they give streptomycin injections *after* the patient swallows the pills. Check to see if they use sterilized syringes and needles for each patient. Whenever possible, praise correct performance. **Unless a health worker is doing something that endangers a patient's life, save critical comments only for an occasion when you can talk alone with the health worker.**

4. Talk with tuberculosis patients

Listen to the patients as they talk with MOs and health workers to see if they are understanding the health education information being provided. Also, talk with the patients on an individual basis. Do this when the local staff is not present. Learning about patient perceptions is crucial for you to understand how the programme is functioning and what areas need improvement. When you talk with patients, explain that you want to make sure that they receive the treatment they need. Ask patients questions such as the following:

- How many drugs are you receiving?
- What do the drugs look like?
- When are you given the drugs?
- How are you given the drugs?
- Do you have to pay for the drugs?
- Do you have any problem in taking treatment?

5. Examine Supplies

Look at the supplies. Check to see if there is an adequate supply of drugs, needles, syringes, ampules of water for injections, sputum containers, laboratory consumables, Tuberculosis Treatment Cards, Identity Cards,

Laboratory Forms for Sputum Examination and Transfer Forms. Look at the dates on the drug bottles, tins, or patient-wise boxes to make sure that staff are using the old stock of drugs before the new stock and that no drugs have expired. Also check if essential equipment such as sterilizer, microscope, etc. is in working order.

During the supervisory visits, take back the unused portions of patient-wise boxes of patients who have defaulted, died, or been transferred. You need to ensure that these drugs are not used for other patients, otherwise incomplete treatment may be given which may create drug resistance. At the TU or district level, partially used patient-wise boxes should be rearranged if the drugs are not past their date of expiry. However, it must be ensured that only complete patient-wise boxes are distributed from the TU.

Use a checklist during the supervisory visit

Inform the MO in advance that you are planning to visit the health unit on a particular day.

Staff are likely to be nervous about being *checked*. If you take out a big checklist and ask your questions in a critical, authoritative manner, the answers you obtain may be brief and incomplete. Use the brief checklist you have developed to guide your visit. Ask your questions in a friendly manner and you are likely to obtain more complete and useful information.

To ensure that the activities to provide tuberculosis services are correctly performed, work with the health staff. Investigate any items that were being done incorrectly. Work together to find possible causes to the problems in performance of activities and solve them. Discuss your findings with the health unit supervisor and appropriate staff. **Summarize your observations and interviews with staff, and discuss and solve any problems you found.** Annexure III gives an example of a format for summarizing your findings and recommendations. Implement solutions immediately, whenever possible. For example, immediately provide supervised practice of a task incorrectly performed. A method that can help solve problems in performance is described in Annexure II. **Refer to these Annexures now.**

Before you leave the health unit, explain to the MO any problems you found and the solutions you implemented. If you need help in solving a problem, discuss it with the District Health Officer (DHO) or the State Tuberculosis Officer (STO).

ANNEXURE I

Forms and registers needed

Names of Registers and Forms	Number needed
Tuberculosis Treatment Card	2 per patient
Tuberculosis Identity Card	1 per patient
Tuberculosis Register	1 per year per TU
Tuberculosis Laboratory Register	1 per year per microscopy centre
Laboratory Form For Sputum Examination	15 per New pulmonary smear-positive case
Mycobacteriology Culture/Sensitivity Test Form	Number determined by State Tuberculosis Officer
Quarterly Report on New and Retreatment Cases of Tuberculosis	16 per year (4 copies x 4 quarters) For each TU and for DTC
Quarterly Report on Sputum Conversion of New Cases, Relapses and Failures	16 per year (4 copies x 4 quarters) For each TU and for DTC
Quarterly Report on the Results of Treatment of Tuberculosis Patients Registered 12–15 Months Earlier	16 per year (4 copies x 4 quarters) For each TU and for DTC
Quarterly Report on Programme Management	**PHI**: 24 x No. PHIs in district **Sub-districts**: 8 x No. TUs in district **District**: 20 copies
Transfer Form	Based on the proportion of patients who were transferred out of the district during the preceding year.

Summary of key indicators and possible actions — ANNEXURE II

Quarterly Report	Indicator	Possible Actions
New and retreatment cases		
Expected: New smear-positive cases: 40–85/100 000	Calculated annualized incidence of New smear-positive cases is less than 40/100 000	Ensure that chest symptomatics in all facilities undergo sputum smear examination (at least 2% adult outpatients). Ensure that three sputum smear examinations are being done on all chest symptomatics. Ensure that sputum smear microscopy is being done correctly (5%–15% positivity among patients examined for diagnosis). Intensify review of slides read as smear-negative, particularly those of patients placed on treatment. Ensure that all smear-positives in the Laboratory Register are recorded in the Tuberculosis Register. Ensure that sputum smear microscopy is accessible to patients throughout the assigned area, with trained laboratory technicians in place.
	Calculated annualized incidence of New smear-positive cases is more than 85/100 000	Ensure that active case-finding is not being done in any area. Ensure that sputum smear microscopy is accurate. Ensure review of slides of smear-positive patients. Ensure that only patients who reside in the area are being treated.
Expected: Retreatment smear-positive cases are 50% of New smear-positive cases in initial years of RNTCP implementation	Retreatment cases are less than 40% of New smear-positive cases	Ensure that accurate history-taking is being done at all levels. Patients must be questioned carefully about prior treatment for tuberculosis from any source. It should be explained to patients that only if they provide accurate information can the most effective treatment be given. Make sure that definitions are being applied correctly. Any smear-positive patient treated in the past for more than one month and has defaulted for more than two months, should receive the retreatment (CAT II) regimen.
	Retreatment cases are more than 70% of New smear-positive cases	Ensure that active case-finding is not occurring. With active case-finding, many ‘old’ TB cases are reported. Ensure that history-taking is accurate and definitions are being correctly applied. Ensure that new symptomatic patients undergo three sputum smear examinations for acid-fast bacilli (AFB).
Expected: At least 50% of all New pulmonary cases will be smear-positive	Among New pulmonary cases, proportion which are smear-positive is less than 40%	Ensure that over-diagnosis of sputum smear-negative patients is not occurring on account of over-reliance on radiography. No patient should begin treatment without having three sputum smear examinations done. Ensure that three sputum smear examinations are being done on all chest symptomatics. Ensure that sputum smear microscopy is being done correctly. Consider review of slides of smear-negative patients placed on treatment.

Quarterly Report	Indicator	Possible Actions
New and retreatment cases (continued)		
Expected: No more than 20% of smear-negative/ extra-pulmonary patients are considered seriously ill and placed under CAT I	The proportion of smear-negative or extra-pulmonary seriously ill patients included in CAT I is greater than 25%	Ensure that only seriously ill patients are given CAT I treatment. Non-seriously ill smear-negative New patients should receive CAT III treatment. Ensure that sputum microscopy is being done correctly. Consider review of slides of smear-negative patients placed on treatment.
Conversion		
Expected: Conversion rate is 90%	Less than 85% of smear-positive CAT I patients are documented to become sputum smear-negative at 3 months	Ensure that Medical Officers, treatment supervisors, and all staff in the programme and at peripheral centres understand the importance of follow-up sputum examinations. Follow-up sputum examinations are the best measure of patient response to treatment. Results of sputum examinations change patient treatment and are critical to programme evaluation. Visit all centres with low rates of sputum conversion and resolve any problems with the help of the staff. Make sure defaulter rates in the first two months are <5%, and that there is not an excess of patients who die or who are transferred out. Visit centres with a low sputum smear conversion rate to discuss with patients and staff about potential reasons. Make sure each centre is aware of their result so that they may take steps to improve performance. Ensure that accurate history-taking is being done at all levels. Patients must be questioned carefully about prior treatment for tuberculosis from any source. It should be explained to patients that only if they provide accurate information can the most effective treatment be given. If previously treated patients are not given the retreatment regimen, they may not respond well to treatment. Make sure that definitions are being applied correctly. Any smear-positive patient treated for more than one month in the past, and with default of more than two months, should receive the retreatment (CAT II) regimen. If previously treated patients are not given the retreatment regimen, they may not respond well to treatment. Ensure that sputum microscopy is accurate. Ensure review of slides of patients who remained smear-positive at the end of the intensive phase. Ensure that every dose of medication is observed during the intensive phase of treatment. Observation sites should be convenient to the patient. The possibility that DOTS is not being strictly followed should be checked by observation, including checking and comparing Treatment Cards with the drugs available in patient-wise boxes.

Quarterly Report	Indicator	Possible Actions
Treatment outcome		
Expected: Cure rate is 85% or more	Cure rate of smear-positive patients is less than 80%	Visit centres with low cure rates to discuss with patients and staff the reasons and possible solutions. Make sure that each centre is aware of its cure rate so that it can take steps to improve performance. Ensure that accurate history-taking is being done at all levels. Patients must be questioned carefully about prior treatment for tuberculosis from any source. It should be explained to patients that only if they provide accurate information can the most effective treatment be given. If previously treated patients are not given the retreatment regimen, they may not respond well to treatment. Make sure that definitions are being applied correctly. Any smear-positive patient treated for more than one month in the past, with default of more than two months, should receive the retreatment (CAT II) regimen. Ensure that every dose of medication is observed during the intensive phase of treatment, and at least one dose per week in the continuation phase. Ensure return of empty blister packs during weekly collection of drugs. Observation sites should be convenient for the patient. Ensure that health workers are dispensing medication properly as per technical guidelines. Ensure that follow-up sputum smear examinations are being done according to guidelines.
	Cure rate of smear-positive CAT I patients is more than 95%	Check to make sure the report is correct. If it is, consider checking to make sure that reporting and classification of treatment outcomes is being done correctly and that all detected smear-positive patients are registered.
Expected: No more than 3% of smear-positive patients are given the treatment outcome 'Treatment completed'	Per cent of New smear-positive patients who are classified as having 'completed' treatment is more than 5%	Ensure that follow-up sputum examinations are being done as per policy. Carefully track this at all New treatment units. Explain to Medical Officers and others the crucial importance of the follow-up sputum examinations. Locate patients who have recently completed treatment and obtain sputum samples for examination. Carefully review all data on patients to ensure accuracy of information and to ensure that treatment is being given under direct observation as per policy.
Expected: No more than 4% New smear-positive patients die during treatment	Per cent of New smear-positive patiens who die during treatment is more than 5%	Ensure that every dose of medication is observed during the intensive phase of treatment, and at least one dose per week in the continuation phase. Observation sites should be convenient to the patient. Review information on patients who died to determine the reasons. If patients are presenting for treatment when already moribund, consider ways and means to encourange more prompt referral and diagnosis so that patients can be treated earlier in the course of their TB illness. If all of the above has been done and death rate is still more than 5%, consider evaluation of the prevalence of HIV infection among TB patients, to be done strictly as per policy with safeguards of confidentiality.

Quarterly Report	Indicator	Possible Actions
Treatment outcome		
Expected: Failure: No more than 4% of New smear-positive patients are smear-positive 5 or more months after the start of treatment	Per cent of New smear-positive patients who fail treatment is more than 5%	Ensure that accurate history-taking is being done at all levels. Patients must be questioned carefully about prior treatment for tuberculosis from any source. It should be explained to patients that only if they provide accurate information can the most effective treatment be given. If previously treated patients are not given the retreatment regimen, they may not respond well to treatment. Make sure that definitions are being applied correctly. Any smear-positive patient treated for more than one month in the past, with default of more than two months, should receive the retreatment (CAT II) regimen. Ensure that every dose of medication is observed during the intensive phase of treatment, and at least one dose per week in the continuation phase. Ensure return of empty blister packs during weekly collection of drugs. Observation sites should be convenient for the patient. Ensure that health workers are dispensing medication properly as per technical guidelines. Ensure that drugs are of acceptable quality, that drugs are stored in appropriate conditions, and that they are being used before their expiry period. If all of the above has been done and failure rate remains higher than 5%, consider evaluation of the level of primary drug resistance in the community.
Expected: Default rate is less than 5%	Default rate of smear-positive CAT I patients is more than 10%	Visit centres which have the highest default rates and interview staff and patients to determine the efforts made to retrieve patients, the reasons for default and possible solutions. Make sure that centres are aware of their default rate so they can take steps to reduce it. Ensure that patient history is being carefully ascertained, including the address. A visit to patients' homes should be made to verify addresses, and landmarks near the house should be recorded in the Treatment Card. To the greatest extent possible, services should be convenient to the patient in terms of distance, time and staff attitudes. During the visit to the house for verification of address, note the name and address of a person who can be contacted in the event the patient defaults. Ensure that directly observed treatment is being given to patients in the intensive phase and at least one dose per week is being directly observed during the continuation phase. Ensure that each centre is aware of its own default rate so that it can take steps to improve performance.
Expected: 'Transferred out' is less than 3%	Percentage of patients who fall under outcome category 'Transferred out' is more than 5%	'Transfer out' can be a way of disguising default. Patients should only be categorized as 'Transferred out' if they have been given a Transfer Form to bring to the jurisdiction to which they are being transferred. Ensure that counterfoils have been received.

ANNEXURE III

Supervisory checklist for the Senior Treatment Supervisor

Treatment Centre:_____ **Date:** _____

Name of STS: _____ **Signature:** _____

Type of Centre: (tick one) ❑ **Treatment Centre** ❑ **X-ray Centre** ❑ **Microscopy Centre**

1. Facility Assessment

Item	Description	Yes	No	Comment
Anti-TB Drugs	Availability of cupboard/almirah for storage			
	Not exposed to direct sunlight or dampness			
	Stored in patient-wise boxes			
	Patient-wise boxes labelled for each patient			
	Within expiry dates			
	FEFO (First-Expired, First-Out) being followed			
	No stock-out during past one month for CAT I			
	No stock-out during past one month for CAT II			
	No stock-out during past one month for CAT III			
	Sufficient stock of needles and syringes for CAT II patients receiving streptomycin injections			
	No stock-out of broad-spectrum antibiotics for chest symptomatic patients during past one month			

Facility Assessment (continued)

Item	Description	Yes	No	Comment
Infra-structure	Private place for physician to speak with patients			
	Sufficient seating for TB clients waiting for treatment			
	Container with drinking water available for patients on DOTS			
	Functional X-ray unit (only in case of X-ray centres)			
	Functional weighing scale available			
Supplies	Sufficient quantity of sputum containers available			
	Sufficient quantity of Laboratory Forms available			
	Spirit lamp available			
	Schedule of sputum smear examinations to be done in month posted/available			
	Sufficient quantity of Tuberculosis Treatment Cards available			
	RNTCP Technical Guidelines available			
	RNTCP Operational Guidelines available			
	RNTCP diagnostic chart from Operational Guidelines (Annexure IIa) displayed in the centre			
Others	DOTS centre is clean and dry			
TOTAL	(add number of 'Yes' and 'No' answers [25 Total])			

Supervisory checklist for the Senior Treatment Supervisor (continued)

Treatment Centre:_____ **Date:** _____

2. Case Detection and Diagnosis

Description	Yes	No	Comment
At least 2% of adult outpatients are undergoing sputum smear examination			
Laboratory Forms for Sputum Examination filled correctly			
Chest symptomatics correctly instructed on how to produce a sputum sample			
Three sputum samples (spot—early morning—spot) are being collected from symptomatics			
Results of sputum smear examinations available within one day			
At least 90% of smear-positive patients were started on DOTS			
At least 90% of smear-positive patients started on DOTS began their treatment within one week of the diagnosis			
Smear-negative patients given at least 10 days of broad-spectrum antibiotics before being started on treatment			
The ratio of New sputum smear-positive cases to sputum smear-negative pulmonary cases is lower than 1:1.2 during the past month			
TB patients are being routinely probed if any of their contacts have symptoms of TB			
TOTAL (add number of 'Yes' and 'No' answers [10 Total])			

Supervisory checklist for the Senior Treatment Supervisor (continued)

Treatment Centre:_____ **Date:** _____

3. Treatment

Description	Yes	No	Comment
At least 20% of smear-positive cases detected are in CAT II			
Correct number and type of drugs given to all patients			
Patients weighing more than 60 kg are being given additional 150 mg of rifampicin			
Alternative resources for observation (community volunteers, hospital staff, etc.) being used to ensure convenience to patients			
Every dose of medicine in the intensive phase is directly observed			
The first week's dose of medicine in the continuation phase is directly observed			
All patients undergo sputum smear examinations at the end of the intensive phase, prior to starting continuation phase treatment			
All patients who had positive smears at the end of the initial intensive phase given an additional month of intensive phase treatment			
The quantities of drugs remaining in the patient-wise boxes tally with the Treatment Cards			
All patients on DOTS can reach the centre within 30 minutes			
Patients bring back the empty blister packs during the continuation phase			
Absentee retrieval is being done within one day during the intensive phase			
Absentee retrieval is being done within one week during the continuation phase			
Health worker administered streptomycin injection *after* the pills are swallowed			
Streptomycin injections are properly given			
TOTAL (add number of 'Yes' and 'No' answers [15 Total])			

Supervisory checklist for the Senior Treatment Supervisor (continued)

Treatment Centre:_____ **Date:** _____

4. Recording and Reporting

Item: Tuberculosis Treatment Cards	Yes	No	Comment
Complete general patient information (name, address, age, contact person) listed			
Tuberculosis Number and name of Health Unit legible and correct			
Sputum smear examination results legible and correct (crosscheck laboratory numbers and results of sputum smear examination for at least 5 patients)			
Weight record legible and done as per schedule			
Disease classification legible and correct			
Drug administration and/or drug collection recorded correctly			
Information on missed and late doses recorded			
Action taken for any missed dose documented in **Remarks** section			
All New tuberculosis patients have Tuberculosis Treatment Cards			
Tuberculosis Treatment Cards updated at the same time when the treatment is given			
TOTAL (add number of 'Yes' and 'No' answers [10 Total])			

Supervisory checklist for the Senior Treatment Supervisor (continued)

Treatment Centre:_____ **Date:** _____

5A. Patient Awareness

Interview at least 4 patients privately (Enter 'Tick' mark if response is 'Yes')

Description	1	2	3	4	Comment
Do you know the symptoms of TB?					
Do you know that TB is infectious if not treated?					
Do you know the number and colour of prescribed drugs?					
Do you know how long you have to take treatment?					
Are all the patients receiving directly observed treatment as per policy, thrice a week in IP and once a week in CP?					
Do you know that irregular/incomplete treatment can make TB incurable?					
Did any one tell you the importance of taking all prescribed drugs for full treatment period?					
Are you aware of the common side-effects of the drugs and what to do if you experience them?					
Do you know that TB can be cured?					
Do you know at what frequency the follow-up sputum smear examinations are to be done?					
Do you know the importance of follow-up sputum smear examinations?					
Do you know of the need and importance of getting symptomatic close contacts examined? (only when the patient is smear-positive)					
TOTAL (add number of 'Yes' answers [12 items])					

5B. Patient Follow-up

Along with the PHW, visit the residence of at least all smear-positive CAT I patients who have interrupted treatment since your last supervisory visit

Description	1	2	3	4	Comment
Did the PHW know the location of each residence?					
Did the PHW make a home visit at least once?					
Did the PHW visit you within one day of you missing a dose during the intensive phase?					
Did the PHW visit you within one week of you missing a dose during the continuation phase?					
Were the dangers and consequences of stopping treatment explained adequately to you?					
Was any time support of influential family members or others enlisted, if necessary, to bring you back under treatment?					
Was the MO informed and involved in trying to bring patient back under treatment?					
TOTAL (add number of 'Yes' answers [7 items])					
TOTAL (A+B)					

QUANTITATIVE EVALUATION OF CENTRE

Area	Number of Yes Answers (a)	Total Items Evaluated (b)	Per cent Score (c) [c= (a/b) x 100]
1. Facility Assessment		25	
2. Case Detection and Diagnosis		10	
3. Treatment		15	
4. Recording and Reporting		10	
5. A. Patient Awareness		12 x ___ pts = ___	
B. Patient Follow-up		7 x ___ pts = ___	
TOTAL			

ANNEXURE IV

Due dates for reports from Tuberculosis Units to DTC

Due On	Quarterly Report	Period Covered
7 January 2000	New and Retreatment Cases	1 October–31 December 1999
	Programme Management	1 October–31 December 1999
	Sputum Conversion Cohort	1 July–30 September 1999
	Treatment Outcome Cohort	1 October–31 December 1998
7 April 2000	New and Retreatment Cases	1 January–31 March 2000
	Programme Management	1 January–31 March 2000
	Sputum Conversion Cohort	1 October–31 December 1999
	Treatment Outcome Cohort	1 January–31 March 1999
7 July 2000	New and Retreatment Cases	1 April–30 June 2000
	Programme Management	1 April–30 June 2000
	Sputum Conversion Cohort	1 January–31 March 2000
	Treatment Outcome Cohort	1 April–30 June 1999
7 October 2000	New and Retreatment Cases	1 July–30 September 2000
	Programme Management	1 July–30 September 2000
	Sputum Conversion Cohort	1 April–30 June 2000
	Treatment Outcome Cohort	1 July–30 September 1999
7 January 2001	New and Retreatment Cases	1 October–31 December 2000
	Programme Management	1 October–31 December 2000
	Sputum Conversion Cohort	1 July–30 September 2000
	Treatment Outcome Cohort	1 October–31 December 1999
7 April 2001	New and Retreatment Cases	1 January–31 March 2001
	Programme Management	1 January–31 March 2001
	Sputum Conversion Cohort	1 October–31 December 2000
	Treatment Outcome Cohort	1 January–31 March 2000
7 July 2001	New and Retreatment Cases	1 April–30 June 2001
	Programme Management	1 April–30 June 2001
	Sputum Conversion Cohort	1 January–31 March 2001
	Treatment Outcome Cohort	1 April–30 June 2000
7 October 2001	New and Retreatment Cases	1 July–30 September 2001
	Programme Management	1 July–30 September 2001
	Sputum Conversion Cohort	1 April–30 June 2001
	Treatment Outcome Cohort	1 July–30 September 2000
7 January 2002	New and Retreatment Cases	1 October–31 December 2001
	Programme Management	1 October–31 December 2001
	Sputum Conversion Cohort	1 July–30 September 2001
	Treatment Outcome Cohort	1 October–31 December 2000
7 April 2002	New and Retreatment Cases	1 January–31 March 2002
	Programme Management	1 January–31 March 2002
	Sputum Conversion Cohort	1 October–31 December 2001
	Treatment Outcome Cohort	1 January–31 March 2001
7 July 2002	New and Retreatment Cases	1 April–30 June 2002
	Programme Management	1 April–30 June 2002
	Sputum Conversion Cohort	1 January–31 March 2002
	Treatment Outcome Cohort	1 April–30 June 2001
7 October 2002	New and Retreatment Cases	1 July–30 September 2002
	Programme Management	1 July–30 September 2002
	Sputum Conversion Cohort	1 April–30 June 2002
	Treatment Outcome Cohort	1 July–30 September 2001

The District TB Officer is to retain one copy for records and send the quarterly reports to the State TB Officer, The National Tuberculosis Institute ('Avalon' 8, Bellary Road, Bangalore 560 003), and the Central TB Division (Nirman Bhavan, Directorate General of Health Services, Ministry of Health and Family Welfare, New Delhi 110 011). All reports to reach Central TB Division by the 24th of the month.

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