Management of Tuberculosis
Training for Health Facility Staff

Answer Sheets

WORLD HEALTH ORGANIZATION
Geneva

WHO/CDS/TB/2003.314l

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ANSWER SHEETS

World Health Organization
Geneva
2003

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Answers to Exercise B

For answers to Questions 1, 2 and 3, see the completed *Register of TB Suspects* on the next page.

4. The next appropriate action that you should take for each TB suspect, based on laboratory results, is:

- **Anna Abouya:** Inform her that she does not have pulmonary TB and no treatment is needed.

- **Nyore Lori:** Refer him to a clinician for a clinical assessment (because he has one positive sputum result).

- **Kumante Waweru**: Follow up with the laboratory to find out what happened to this suspect's results.

- **Pooran Singh**: He does not have infectious pulmonary TB. However, because he is still sick with cough, he needs care. Refer him to a clinician, if possible. Otherwise, treat him with a non-specific antibiotic such as co-trimoxazole or ampicillin.

  Then if the cough persists, repeat examination of three sputum smears. If two or more smears are positive, treat for TB. If one or none is positive, refer him to the district hospital.

- **Esna Josephus**: Quickly inform the patient that she has smear-positive pulmonary TB. Open a *TB Treatment Card* and begin her treatment. Also ask her to bring to the health centre all children in her household aged less than 5 years and any others in the household who have cough.

Year 2002

REGISTER OF TB SUSPECTS

Facility Veld Health Centre

Date	TB Suspect Number	Name of TB Suspect	Age M	Age F	Complete Address	Date Sputum Sent to Lab	Date Results Received	Results of Sputum Examinations 1	2	3	TB Treatment Card Opened? (record date)	Observations/ Clinician's Diagnosis
13/11	489	Anna Abouya		27	192 Market Rd. Apt 3, Veld	15/11	22/11	neg	neg	neg		
13/11	490	Nyore Lori	40		Bader House, 280 Airport Rd, Veld	15/11	22/11	neg	7	neg		
14/11	491	Kumante Waweru	31		21 Middle St, Raman	19/11						
14/11	492	Pooran Singh	65		5 President St, Veld	16/11	22/11	neg	neg	neg		
14/11	493	Esna Josephus		21	77 Kingsway Park, Veld	16/11	22/11	++	++	+		

Answers to Exercise A

Case 1: Adesa Abkar

a) Pulmonary
b) New
c) Category I

Case 2: Marcus Marin

a) Pulmonary
b) Relapse
c) Category II

Case 3: Raj Makena

a) Pulmonary
b) New
c) Category I

Case 4: Janu Nair

a) Pulmonary
b) Treatment after default
c) usually Category II

Answers to Exercise B, Case 1

TUBERCULOSIS TREATMENT CARD

Name Adesa Abkar
Complete address 27 Market Rd, Aruna
Sex: M ☐ F ☑ Age 22
Name and address of community treatment supporter (if applicable) _____

District TB No. _____
Health facility Cochan Health Centre

Disease site
Pulmonary ☑ Extrapulmonary ☐ (specify) _____

Type of patient
New ☑ Treatment after failure ☐
Relapse ☐ Treatment after default ☐
Transfer in ☐ Other (specify) ☐ _____

I. INITIAL PHASE — Prescribed regimen and dosages

Tick frequency: Daily ☑ 3 times/week ☐

Tick category and indicate number of tablets per dose and dosage of S (grams):

CAT I	CAT II	CAT III	CAT IV
New case ☑ (smear-positive, or seriously ill smear-negative, or EP)	Re-treatment ☐	New case ☐ (smear-negative or EP)	Chronic or MDR-TB ☐
3			
HR Z E[S]	HR Z E S	HR Z E	

HR: isoniazid and rifampicin Z: pyrazinamide E: ethambutol S: streptomycin

Results of sputum examination				Weight (kg)
Month	Date	Smear	Lab. No.	
0	28-8-01	+++	497	48

Tick appropriate box after the drugs have been administered

Drugs given to supporter

MONTH \ DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Number doses this month	Total number doses given	DATE	DOSES

Please turn over for continuation phase

II. CONTINUATION PHASE — Prescribed regimen and dosages

Tick frequency: Daily ☐ 3 times/week ☑

Tick category:	CAT I	CAT II	CAT III	CAT IV
	New case ☑ (smear-positive, or seriously ill smear-negative or EP)	Re-treatment ☐	New case ☐ (smear-negative or EP)	Chronic or MDR-TB ☐
Indicate number of tablets per dose:	3 (4 months) HR or (6 months) HE	(5 months) HR E	(4 months) HR or (6 months) HE	

MONTH \ DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Number doses this month	Total number doses given

Enter ✔ on day of directly observed treatment. For a self-administered regimen, enter **X** on day when drugs are collected. Any time drugs are given for self-administration, draw a horizontal line (———) through the number of days' supply given.

Observations:

Name and address of contact person Mara Abkar, 102 Market Road, Aruna

Treatment outcome
Date of decision _____
Cure ☐
Treatment completed ☐
Treatment failure ☐
Died ☐
Default ☐
Transfer out ☐

Answers to Exercise B, Case 2

TUBERCULOSIS TREATMENT CARD

Name Marcus Marin — District TB No. _____

Complete address 131 Longstreet, Aruna — Health facility Cochan Health Centre

Sex: M ☑ F ☐ Age 33

Name and address of community treatment supporter (if applicable) _____

Disease site
Pulmonary ☑ Extrapulmonary ☐ (specify) _____

Type of patient
New ☐ Relapse ☑ Transfer in ☐ Treatment after failure ☐ Treatment after default ☐ Other (specify) ☐ _____

I. INITIAL PHASE — Prescribed regimen and dosages

Tick frequency: Daily ☑ 3 times/week ☐

Tick category and indicate number of tablets per dose and dosage of S (grams):

CAT I	CAT II	CAT III	CAT IV
New case ☐ (smear-positive, or seriously ill smear-negative, or EP)	Re-treatment ☑	New case ☐ (smear-negative or EP)	Chronic or MDR-TB ☐
[ ][ ][ ] HR Z E [S]	[4][ ][1g] HR Z E S	[ ][ ][ ] HR Z E	[ ][ ][ ][ ][ ]

Stop Streptomycin after 56 doses

HR: isoniazid and rifampicin Z: pyrazinamide E: ethambutol S: streptomycin

Results of sputum examination				Weight (kg)
Month	Date	Smear	Lab. No.	
0	23-8-01	++	489	56

Tick appropriate box after the drugs have been administered

Drugs given to supporter

MONTH \ DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Number doses this month	Total number doses given	DATE	DOSES

Please turn over for continuation phase

II. CONTINUATION PHASE — Prescribed regimen and dosages

Tick frequency: Daily ☐ 3 times/week ☑

Tick category:	CAT I	CAT II	CAT III	CAT IV
	New case ☐ (smear-positive, or seriously ill smear-negative or EP)	Re-treatment ☑	New case ☐ (smear-negative or EP)	Chronic or MDR-TB ☐
Indicate number of tablets per dose:	[ ] (4 months) HR or [ ] (6 months) HE	[4][6] (5 months) (HR) E	[ ] (4 months) HR or [ ] (6 months) HE	[ ][ ][ ][ ]

MONTH \ DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Number doses this month	Total number doses given

Enter ✔ on day of directly observed treatment. For a self-administered regimen, enter **X** on day when drugs are collected. Any time drugs are given for self-administration, draw a horizontal line (———) through the number of days' supply given.

Observations:

_____

_____

_____

_____

Name and address of contact person Anna Marin (wife), 131 Longstreet, Aruna

Treatment outcome
Date of decision _____
Cure ☐
Treatment completed ☐
Treatment failure ☐
Died ☐
Default ☐
Transfer out ☐

Answers to Exercise B, Case 3

TUBERCULOSIS TREATMENT CARD

Name Raj Makena
Complete address 11 Market Place, Aruna
Sex: M ☑ F ☐ Age 28
Name and address of community treatment supporter (if applicable) _____

District TB No. _____
Health facility Cochan Health Centre

Disease site
Pulmonary ☑ Extrapulmonary ☐ (specify) _____

Type of patient
New ☑ Treatment after failure ☐
Relapse ☐ Treatment after default ☐
Transfer in ☐ Other (specify) ☐ _____

I. INITIAL PHASE — Prescribed regimen and dosages

Tick frequency: Daily ☑ 3 times/week ☐

Tick category and indicate number of tablets per dose and dosage of S (grams):

CAT I	CAT II	CAT III	CAT IV
New case ☑ (smear-positive, or seriously ill smear-negative, or EP)	Re-treatment ☐	New case ☐ (smear-negative or EP)	Chronic or MDR-TB ☐
3 (HR Z E [S] ☑)	(HR Z E S)	(HR Z E)	( )

HR: isoniazid and rifampicin Z: pyrazinamide E: ethambutol S: streptomycin

Results of sputum examination				Weight (kg)
Month	Date	Smear	Lab. No.	
0	30-8-01	+	560	53

Tick appropriate box after the drugs have been administered

Drugs given to supporter

MONTH \ DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Number doses this month	Total number doses given	DATE	DOSES

Please turn over for continuation phase

II. CONTINUATION PHASE — Prescribed regimen and dosages

Tick frequency: Daily ☐ 3 times/week ☑

Tick category:

	CAT I	CAT II	CAT III	CAT IV
	New case ☑ (smear-positive, or seriously ill smear-negative or EP)	Re-treatment ☐	New case ☐ (smear-negative or EP)	Chronic or MDR-TB ☐
Indicate number of tablets per dose:	3 (4 months) HR or ( ) (6 months) HE	( ) (5 months) HR E	( ) (4 months) HR or ( ) (6 months) HE	( )

MONTH \ DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Number doses this month	Total number doses given

Enter ✔ on day of directly observed treatment. For a self-administered regimen, enter **X** on day when drugs are collected. Any time drugs are given for self-administration, draw a horizontal line (———) through the number of days' supply given.

Observations:

_____
_____
_____
_____

Name and address of contact person Sajiv Gondar, Circle Rd. behind Government House, Aruna

Treatment outcome
Date of decision _____
Cure ☐
Treatment completed ☐
Treatment failure ☐
Died ☐
Default ☐
Transfer out ☐

Answers to Exercise B, Case 4

TUBERCULOSIS TREATMENT CARD

Name Janu Nair
Complete address 45 College Street, Aruna
Sex: M ☑ F ☐ Age 56
Name and address of community treatment supporter (if applicable) _____

District TB No. _____
Health facility Cochan Health Facility

Disease site
Pulmonary ☑ Extrapulmonary ☐ (specify) _____

Type of patient
New ☐ Treatment after failure ☐
Relapse ☐ Treatment after default ☑
Transfer in ☐ Other (specify) ☐ _____

I. INITIAL PHASE — Prescribed regimen and dosages

Tick frequency: Daily ☑ 3 times/week ☐

Tick category and indicate number of tablets per dose and dosage of S (grams):

CAT I	CAT II	CAT III	CAT IV
New case ☐ (smear-positive, or seriously ill smear-negative, or EP)	Re-treatment ☑	New case ☐ (smear-negative or EP)	Chronic or MDR-TB ☐
HR Z E [S]	3 — 0.75g (HR Z E) S	HR Z E	

HR: isoniazid and rifampicin Z: pyrazinamide E: ethambutol S: streptomycin

Stop streptomycin after 56 doses

Results of sputum examination				Weight (kg)
Month	Date	Smear	Lab. No.	
0	12-10-01	+	653	42

Tick appropriate box after the drugs have been administered

Drugs given to supporter

MONTH \ DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Number doses this month	Total number doses given	DATE	DOSES

Please turn over for continuation phase

II. CONTINUATION PHASE — Prescribed regimen and dosages

Tick frequency: Daily ☐ 3 times/week ☑

	CAT I	CAT II	CAT III	CAT IV
Tick category:	New case ☐ (smear-positive, or seriously ill smear-negative or EP)	Re-treatment ☑	New case ☐ (smear-negative or EP)	Chronic or MDR-TB ☐
Indicate number of tablets per dose:	HR ☐ (4 months) or HE ☐ (6 months)	(HR) 3 E 4 (5 months)	HR ☐ (4 months) or HE ☐ (6 months)	☐☐☐☐

MONTH \ DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Number doses this month	Total number doses given

Enter ✔ on day of directly observed treatment. For a self-administered regimen, enter **X** on day when drugs are collected. Any time drugs are given for self-administration, draw a horizontal line (———) through the number of days' supply given.

Observations:

Name and address of contact person Jair Prabakar (grocery) 39 College Street, Aruna

Treatment outcome
Date of decision _____
Cure ☐
Treatment completed ☐
Treatment failure ☐
Died ☐
Default ☐
Transfer out ☐

Answers to Exercise C

TUBERCULOSIS TREATMENT CARD

Name Raj Makena — District TB No. 1261

Complete address 11 Market Place, Aruna — Health facility Cochan Health Centre

Sex: M ☑ F ☐ Age 28

Name and address of community treatment supporter (if applicable) _____

Disease site: Pulmonary ☑ Extrapulmonary ☐ (specify) _____

Type of patient: New ☑ Relapse ☐ Transfer in ☐ Treatment after failure ☐ Treatment after default ☐ Other (specify) ☐ _____

I. INITIAL PHASE — Prescribed regimen and dosages

Tick frequency: Daily ☑ 3 times/week ☐

Tick category and indicate number of tablets per dose and dosage of S (grams):

CAT I	CAT II	CAT III	CAT IV
New case ☑ (smear-positive, or seriously ill smear-negative, or EP)	Re-treatment ☐	New case ☐ (smear-negative or EP)	Chronic or MDR-TB ☐
3 (HR Z ~~D~~ [S])	(HR Z E S)	(HR Z E)	( )

HR: isoniazid and rifampicin Z: pyrazinamide E: ethambutol S: streptomycin

Results of sputum examination				Weight (kg)
Month	Date	Smear	Lab. No.	
0	30-8-01	+	560	53
2	5-11-01	neg	622	51

Tick appropriate box after the drugs have been administered

Drugs given to supporter

MONTH \ DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Number doses this month	Total number doses given	DATE	DOSES
Sept			✓	✓	✓	✓	✓	✓	–	✓	✓	✓	✓	✓	✓	–	✓	0	0	0	✓	✓	–	✓	✓	✓	✓	✓	✓	–	/	21	21		
Oct	✓	✓	✓	✓	✓	✓	–	✓	✓	✓	✓	✓	–	—	—	—	—	—	✓	✓	–	✓	✓	✓	✓	✓	✓	–	✓	✓	✓	27	48		
Nov	✓	✓	✓	–	✓	✓	✓	✓	✓																							8	56		

Please turn over for continuation phase

II. CONTINUATION PHASE — Prescribed regimen and dosages

Tick frequency: Daily ☐ 3 times/week ☑

Tick category:	CAT I	CAT II	CAT III	CAT IV
	New case ☑ (smear-positive, or seriously ill smear-negative or EP)	Re-treatment ☐	New case ☐ (smear-negative or EP)	Chronic or MDR-TB ☐
Indicate number of tablets per dose:	3 (4 months) HR; or ( ) (6 months) HE	( ) (5 months) HR E	( ) (4 months) HR; or ( ) (6 months) HE	( )

MONTH \ DAY	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	Number doses this month	Total number doses given
Nov										✓	–	✓		0	✓	✓		–	✓		✓		✓		–	✓		✓		✓	/	10	10
Dec		–	✓	0	0		–	✓		✓		✓		✓		–	✓		✓		✓		–							–	✓	11	21
Jan																																	

Enter ✓ on day of directly observed treatment. For a self-administered regimen, enter **X** on day when drugs are collected. Any time drugs are given for self-administration, draw a horizontal line (———) through the number of days' supply given.

Observations:

21 Sept - visited Raj at home - has been sick. Gave treatment.
13 Oct - going to brother's - gave Raj 4 doses for 15-18 Oct.
21 Dec - to brother's - gave 3 doses for next week.

Name and address of contact person Sajiv Gondar, Circle Rd behind Government House, Aruna

Treatment outcome

Date of decision _____

Cure ☐
Treatment completed ☐
Treatment failure ☐
Died ☐
Default ☐
Transfer out ☐

Answers to Exercise D

PART I

Case 1: Adesa Abkar (Category I)

She should have the next sputum smear examination in the last week of the third month of treatment.

Case 2: Marcus Marin (Category II)

He is due for the next sputum smear examination in the last week of the eighth month of treatment.

Case 3: Raj Makena (Category I)

He is due for the next sputum smear examination in the last week of the fifth month of treatment.

Case 4: Janu Nair (Category II)

He is due for the next sputum smear examination in the last week of the fifth month of treatment, that is, approximately during the week of 1 April.

PART II

Case 1: Adesa Abkar (Category I)

The health worker should consider this patient a treatment failure because the sputum smear examination after 5 months is still positive. The appropriate action is to close the *TB Treatment Card* and record the outcome as "Treatment failure."

Prepare a new *TB Treatment Card*. On the new card, mark the "Type of patient" as "Treatment after failure." Select a full course of the re-treatment regimen (Category II). Attach the old card to the new card.

Case 2: Marcus Marin (Category II)

The health worker should have the patient continue treatment until all the tablets are gone. Because the sputum smear examination in the eighth month is negative, the treatment has worked well.

Case 3: Raj Makena (Category I)

The health worker should have the patient to complete continuation phase treatment. Because the sputum smear examination at 5 months is negative, the treatment is working well.

He should get another sputum smear examination in the last week of the sixth month of treatment.

Case 4: Janu Nair (Category II)

The appropriate action is to take continuation phase (Category II) treatment until it is completed.

He should have another sputum smear examination in the last week of the eighth month of treatment.

Answers to Exercise E

Case 1: Adesa Abkar

Treatment outcome

Date of decision: 28–1-02

Cure ❒
Treatment completed ❒
Died ❒
Treatment failure ☑
Default ❒
Transfer out ❒

Case 2: Marcus Marin

Treatment outcome

Date of decision: 9 –5- 02

Cure ☑
Treatment completed ❒
Died ❒
Treatment failure ❒
Default ❒
Transfer out ❒

Case 3: Raj Makena

Treatment outcome

Date of decision: 5 - 3 - 02

Cure ❒
Treatment completed ☑
Died ❒
Treatment failure ❒
Default ❒
Transfer out ❒

Raj's outcome is not "Cured" because he had no sputum examination in the last month of treatment.

Case 4: Janu Nair

Treatment outcome

Date of decision: 25-6-02_

Cure ❒
Treatment completed ❒
Died ❒
Treatment failure ❒
Default ☑
Transfer out ❒

Janu Nair seems to have defaulted. His last treatment was on 25 April. The health worker must wait 2 months to record this outcome, in case the patient comes back.

If, after 2 months (by 25 June), Mr Nair has not come back or been heard from, the outcome "Default" can be recorded. The date of decision would be 25 June.

Possible Answers to Exercise A

1. Possible questions about Mr Akhim's current knowledge of TB include:

   What do you understand tuberculosis, or TB, to be?
   What do you think causes TB? How is it spread?
   Have you ever known anyone who had TB? What happened to that person?
   What have you heard about curing TB?

2. Examples of important points for Mr Akhim include:

   TB is caused by a germ.

   TB spreads when an infected person coughs or sneezes, spraying TB germs into the air. Others may breathe these germs and become infected. Anyone can get TB.

   TB can be cured with the right drug treatment. There is usually no need to stay in the hospital. You can live normally at home.

   Other important messages are listed on pages 7 and 8 of the module, which you will read soon. The preceding points are especially important for Mr Akhim, given his wrong beliefs about TB and how it is spread.

Possible Answers to Exercise B

1. The participant should have listed two checking questions such as:

   – *When will you come for your next dose?*
   – *Where will you come?*
   – *How often will your come? For how long?*
   – *How many tablets will you take? What colour will they be?*

2. The participant should have listed two checking questions such as:

   – *Why is it important to keep coming for treatment?*
   – *What might happen if you stop coming for treatment?*
   – *How much longer will you need to come for treatment? How often?*

Possible Answers to Exercise E

What would you say or do if....?	Possible answers:
A new patient wants to take the drugs unsupervised at home.	Ask why the patient wants to take the drugs at home. If it is very inconvenient to come to the health facility, discuss possible community treatment supporters. Explain that it is a firm policy to insist on directly observed treatment. It is the only way to obtain the drugs. It is important for the health worker to see the patient to make sure there no problems with side-effects, etc. Reassure the patient that after the initial-phase drugs can be self-administered *(if this is policy)*.
The patient has missed 1 day of treatment.	Find out why the patient missed the dose. Attempt to solve any problems. Remind the patient of the need to take all of the doses for the prescribed time.
The patient does not want to have a sputum examination after 5 months' treatment.	Find out why. Explain the need for the examination. Explain that it is important to be sure that the patient is cured.
The patient says that her husband, who has cough, does not have time to be tested for TB.	Find out whether the patient has told her husband about her illness. Explain that it is important for him to be tested. He could spread TB to others and reinfect her. Offer to visit the husband and explain the need for testing.
The patient is afraid to tell her family that she has TB.	Find out why she is afraid. If she fears being turned out of her home, reassure her that, as long as she comes for treatment, her family does not have to know. Offer to talk with the family about TB if acceptable to the patient. Reassure the family that the patient will not be infectious after 2–3 weeks of treatment, as long as she continues treatment. Explain how TB is spread and how it can be prevented.
A family member says that the TB patient cannot stay at home because the children will catch TB.	Same as above, plus: If necessary, help the TB patient find a place to stay temporarily.
The patient questions the need to use condoms since he does not have HIV.	Remind the patient that he could become infected with HIV at any time. He needs a condom to protect himself as well as others. If he becomes infected with HIV, it will be harder to be cured of TB.

Suggested Answers to Exercise C

a) Yes, Mr Kumari has stopped giving treatment on Sundays.

b) The patient has not gone out of town again.

c) Yes. Even though today is 18 April, the treatment supporter has ticked the card through 23 April. It is wrong to tick the card before the treatment has been given.

d) Ask Mr Kumari questions to find out if the drugs are really being given and why he ticked dates that are still in the future. Tell Mr Kumari to never tick the card until after administering (directly observing) the treatment. This is very important.

Also talk to the patient to find out whether treatment is directly observed and whether the patient is really receiving treatment every day, as the card shows.

e) No. The health worker cannot give the TB treatment supporter the next month's drug supply today. The health worker should ask the patient and the treatment supporter to return on 23 or 24 April when the results of the sputum smear examination are available. Only with those results can the health worker decide what the next month's drugs should be.

- If negative, begin the continuation phase of treatment. Ask the treatment supporter (or the patient, if the continuation phase will be self-administered) to begin the continuation phase drugs after all the initial-phase drugs are administered.

- If positive, give one additional month of the initial-phase drugs.

Note: If the treatment supporter and patient say that they cannot return in 3–4 days, or the health worker fears that they will not return, the health worker may decide to go ahead and give the drugs for the continuation phase. However, if when the sputum smear examination results are received, they are positive, the health worker must find the patient and adjust the drug treatment to continue the initial phase of treatment for one extra month.

TUBERCULOSIS REFERRAL/TRANSFER FORM

(Complete top part in triplicate)

Tick and comment to indicate the reason for this referral or transfer:

☐ Referral to register and begin TB treatment

☐ Referral for _____

☑ Transfer (registered patient is moving)

Name/address of referring/transferring facility Maturana Health Centre, M. Ghandi Road 274, Lakari

Name/address of facility to which patient is referred/transferred Samarkola Health Centre, Block 4, Nehru Place, Samarkola

Name of patient Tesfaye Jifar Age 32 Sex: M ☑ F ☐

Address (if moving, future address) Care of Sakib Jifar, Garan Du St. 137, Samarkola

Name and address of contact person for patient Manu Roa, tailor shop, Main Street

Diagnosis* Pulmonary Tuberculosis

District TB No.* 798 Date treatment started* 6 March 2002

Category of treatment:*

- ☑ CAT I New case, smear-positive
- ☐ CAT II Re-treatment
- ☐ CAT III New case, smear-negative or extrapulmonary
- ☐ CAT IV Chronic or MDR-TB

Drugs patient is receiving (H 150mg / R 150mg) 3 tablets, 3 times/week

Remarks (e.g. side-effects observed) continuation phase started 13 May

Signature M. Ali Moran Position Nurse Date of referral/transfer 17 June 2002

**Complete if known. If this is a referral for diagnosis, these items may be unknown.*

For use by facility to which patient has been referred or transferred:

Name of facility _____

District _____ Date _____

Name of patient _____ District TB No. _____

The above patient reported at this facility on _____(date)

Signature _____ Position _____

Send this part back to referring/transferring facility as soon as patient has reported.

Answers to Exercise A, Questions 1–4

1. Contact the Samarkola Health Centre to find out if Mr Jifar has reported for treatment. If not, give the health centre any contact information that you have.

2. Contact the Smarkola Health Centre towards the end of September, when Mr Jifar's treatment should be completed. Reasoning:

   According to his *TB Treatment Card*, Mr Jifar started the continuation phase in mid-May (13 May). Mr Jifar should have completed his 4 months of the continuation phase in mid-September, but he will not finish until the end of September since he missed 2 weeks of doses after his move.

3. "Treatment completed" is the outcome.

4. On the back of the original *TB Treatment Card*, the outcome "transfer out" and the date 17 June should be marked out. The date 1 October should be recorded, and the box for "treatment completed" should be ticked.

Answers to Exercise B

Worksheet 1: Data on TB case detection

Circle the previous quarter: (1) **2 3 4** **of year:** 2002

Record the dates included in the previous quarter: 1-1-02 – 31-3-02

1a. 3 000

1b. 150

1c. 140

1d. 14

Answers to Exercise C

Worksheet 2: Data on TB treatment

Part A – Conversion (for the quarter that ended 3 months ago)

Circle the quarter that ended 3 months ago: 1 2 3 (4) of year: 2001

Record the dates in that quarter: 1 Oct '01 – 31 Dec '01

2a. } *Already done; 9 treatment cards found for smear-*
2b. } *positive cases put on treatment in 4th quarter of 2001*

2c. *The participant should have noticed that one case, John Masinda, was not new but was a relapse. Thus, John Masinda's card should be "put back in the files" and not counted in the next step.*

2d. 8

2e. 6

Part B – Treatment outcomes (for the quarter that ended 12 months ago)

Circle the quarter that ended 12 months ago: (1) 2 3 4 of year: 2001

Record the dates in that quarter: 1 Jan '01 – 31 Mar '01

2f. 10

Number of cases with each outcome:

2g. 4 Cure 2h. 2 Treatment completed 2i. 2 Default

2j. 1 Transfer out 2k. 0 Treatment failure 2l. 1 Died

Summary Worksheet: Indicators to monitor TB case detection and treatment

To monitor:	Measure these indicators:	Record time frame: [a]	How to calculate (numerator / denominator) [b]	Calculate and record result here:
TB case detection *(using data from Register of TB Suspects, compiled on **Worksheet 1**)*	Proportion of outpatients aged 15 years and over who were identified as TB suspects	previous quarter: 1st, 2002	Number TB suspects identified (1b) / Total outpatients aged 15 years and over (1a) = 150 / 3 000	0.05 or 5%
	Proportion of TB suspects whose sputum was tested for TB	previous quarter: 1st, 2002	Number TB suspects whose sputum was tested (1c) / Number TB suspects identified (1b) = 140 / 150	0.93 or 93%
	Proportion of TB suspects tested who were sputum smear-positive	previous quarter: 1st, 2002	Number smear-positive cases detected (1d) / Number TB suspects whose sputum was tested (1c) = 14 / 140	0.10 or 10%
TB treatment *(using data from Register of TB Suspects and TB Treatment Cards, compiled on **Worksheet 2**)*	**Conversion rate**: Proportion of new sputum smear-positive TB cases that converted at 2 or 3 months	quarter that ended 3 months ago: 4th, 2001	Number new smear-positive cases that converted at 2 or 3 months (2e) / Number new smear-positive cases put on treatment (2d) = 6 / 8	0.75 or 75%
	Treatment outcomes: Proportion of new sputum smear positive cases that: – were cured	quarter that ended 12 months ago: 1st, 2001	Number new smear-positive cases cured (2g) / Number new smear-positive cases put on treatment (2f) = 4 / 10	0.40 or 40%
	– completed treatment	quarter that ended 12 months ago: 1st, 2001	Number new smear-positive cases that completed treatment (2h) / Number new smear-positive cases put on treatment (2f) = 2 / **10**	0.20 or 20%
	– defaulted	quarter that ended 12 months ago: 1st, 2001	Number new smear-positive cases that defaulted (2i) / Number new smear-positive cases put on treatment (2f) = 2 / 10	0.20 or 20%

[a] *The time frame applies to the denominator. The persons in the numerator are part of this group.*
[b] *Step numbers in parentheses tell where to find the numerator and denominator on Worksheet 1 or 2.*

Answers to Exercise D, continued

Answers to questions in the module, pages 57–58:

1. 140 TB suspects had sputum tested.
   93% of TB suspects had their sputum tested.

2. In the quarter that ended 3 months ago, 8 new sputum smear-positive cases were put on treatment. Of these cases, 6 converted at 2 or 3 months. This means that 75% of the cases converted.

3. 10 new sputum smear-positive cases were put on treatment.
   2 of these cases defaulted.
   That means that 20% defaulted.

4. 4 cases of the 10 were cured.
   That means that 40% were cured.

5. 2 cases completed treatment.
   That means that 20% completed treatment.

6. 40% cured + 20% completed = 60% "success."

Answers to Exercise E

Part A

Graph: The final points plotted should be 140 TB suspects tested and 14 sputum smear-positive cases detected.

1. The number of TB suspects tested has increased greatly (tripled).
   The increase could be due to improvements in the following areas:
   – asking adult patients routinely about cough,
   – collecting sputum samples from TB suspects,
   – being sure to send the sputum samples to the laboratory, and
   – obtaining and recording results of sputum examinations.

2. The number of sputum smear-positive cases detected has stayed about the same.
   The percentage of TB suspects tested who were smear-positive is now in the expected range (14 out of 140, or 10%). Formerly, although fewer TB suspects were tested, a much higher percentage were smear-positive, suggesting that sputum samples were only collected for patients who obviously appeared sick. Since the number of cases detected has not increased with the number of suspects tested, it is possible that health workers were doing a good job "guessing" who had TB.

   Another possible explanation is that, by aggressive testing, the health centre is now finding almost all of the smear-positive TB cases in the community; if this is true, the number of cases detected each quarter is not likely to increase. However, cases are probably being detected earlier so that they are less likely to infect others.

Part B

1. The last row of the table should show that 6 out of 8 cases, or 75%, converted.

   a) The conversion rate has increased
   Patient compliance and treatment practices are probably improving.

   b) The conversion rate has not quite reached the desired level of at least 80%.
   There may still be some problems with patient compliance or treatment practices.

2. a) The proportion of cases cured is higher. This suggests that follow-up sputum examinations are being done to prove cures. However, it is important to try harder to do follow-up examinations on <u>all</u> of the cases.

   b) The proportion that completed treatment plus the proportion cured is 60%. The proportion that defaulted is 20%. That is much higher than the desired percentage of less that 5%. Improvements may be needed to ensure that patients do not default, and that outcomes are found for patients who transfer.
   Investigate problems related to convenience of treatment and motivation of patients:

   Must TB patients wait to receive treatment?
   Are community treatment supporters used as needed?
   Do patients understand the importance of completing treatment even after they feel better?