TRAINING MODULE
FOR
PRIVATE PRACTITIONERS

Final Draft
October, 2008

Developed by
National TB Control Program
Ministry of Health
Government of Pakistan
PREFACE

Pakistan has the 8th highest tuberculosis (TB) burden in the world, with an estimated incidence of 182/100,000. There are approximately 1.5 million people in Pakistan living with the disease. The National targets are in line with the Millennium Development Goals (MDGs) i.e. to cure 85% of detected new cases of sputum smear positive pulmonary TB and to detect 70% of estimated cases once 85% cure rate is achieved. The commitment at all levels resulted in rapid expansion of the DOTS strategy from 2000 to 2005, reaching DOTS-all-over in May 2005. Despite the 100% DOTS coverage in Public Sector, Case Detection still remained 38 percent; which was well below the global target of 70 percent.

It is widely recognized that a large proportion of TB patients seek care from private providers, mainly outside the network of National Tuberculosis Program (NTP). These include private (for profit and no-for profit) providers and para- statal healthcare institutions and they do not follow the recommended DOTS strategy for management of TB, hence depriving patients to gain quality management and treatment. NTP based on the evidence recognizing role of private sector, started joint ventures with NGOs through Global Fund and FIDELIS assistance. These efforts contributed in increase CDR i.e. 68% in 2007.

Considerable evidence on implementation of PPM is now available in the country and Different PPM models have been implemented by NTP and partners. The NTP Pakistan, with its public DOTS program now well-established, is drawing lessons from existing PPM ventures. NTP in Pakistan has therefore intensified its efforts through several innovative approaches in PPM. This aims to ensure that TB patients that attend a large and diverse private sector access appropriate diagnosis and treatment.

Keeping in view the need for training material for Private Providers, NTP decided to develop a standardized module for training of Private Practitioners. I hope this module will be very useful to train private providers to provide quality DOTS services for control of the menace of TB.

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National TB Control Program
Manager, Pakistan
ACKNOWLEDGEMENT

In preparation of this document we greatly acknowledge the contributions of Provincial TB Program (PTP) Managers, Deputy Provincial TB Program (DPTP) Managers, WHO National Program Officers, NTP technical staff and other colleagues who spared their time and shared their knowledge and experience.

The National TB Control Program gratefully acknowledges the enormous support provided to us by the honorable Secretary for Health, ministry of health Pakistan. We do appreciate encouragement and full cooperation by the Director General Health Services, Ministry of Health Pakistan.

The competence and dedication of the NTP Officers and support Staff towards the preparation of this Module for doctors working at the facilities level is greatly appreciated. All the concern individuals, who provide quality, care for patients and to reach the DOTS strategy targets in time throughout the country is highly commendable.

Apart from the general acknowledgement we mentioned above, NTP highly acknowledges the efforts of the following expertise who contributed a lot to finalize this module.

**Experts, who contributed to Refresher Training Module for Doctors**

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Dr. Muhamamd Razaq, Deputy Manager, PTP Punjab
Dr. Nauman Safdar, Association for Social Development
Dr. Haroon Ibrahim, Green Star Social Marketing
Dr. Khalid Mehmood, Pakistan Anti TB Association
SESSION 1: INTRODUCTION

SESSION OBJECTIVES
At the end of the session the participants will:
- Know the burden of disease and other facts on TB
- Know the details of the DOTS strategy for control of TB in Pakistan
- Understand the rational of PPM in TB control and role of health workers
- Understand the significance, components and use of TB desk guide.

IMPORTANCE OF TUBERCULOSIS AS A PUBLIC HEALTH PROBLEM

Tuberculosis is an infectious, systemic, chronic granulomatous disease caused by Mycobacterium Tuberculosis. Infection occurs almost exclusively through the respiratory system by inhalation of tubercle bacilli i.e. droplet infection. The World Health Organization (WHO) declared tuberculosis (TB) a global emergency in 1993 in recognition of the growing importance of TB as a public health problem. Some facts are as under:

- Pulmonary TB is infectious and spreads through the air (droplets). If not treated, each person with active TB infects about 10 to 15 people every year.
- 1 in 10 person infected with TB bacilli will become sick with active TB in their lifetime; people with HIV are at a much greater risk.
- Globally 2 billion people, equal to one-third of the world’s total population, are infected with TB bacilli.
- The Global prevalence of the disease is around 16-20 million.
- Approximately 9 million new TB cases develop every year.
- Approximately 2 million people die of TB annually.
- More than 90% of TB cases and deaths occur in the developing countries.
- TB usually affects persons in their most economically productive age group of 15-54 years.

DISEASE BURDEN IN PAKISTAN

- Tuberculosis (TB) is one of the major public health problems in Pakistan.
- Pakistan ranks 8th amongst the countries with the highest burden of TB in the world and contributes about 55% of tuberculosis burden in the Eastern Mediterranean Region (EMRO) of WHO.
- The incidence of sputum smear positive TB cases in Pakistan is 82/100,000 per year and for all types it is 181/100,000.
- TB is responsible for 5.1 percent of the total national disease burden in Pakistan. The impact of TB on socio-economic status is substantial.

DIRECTLY OBSERVED TREATMENT SHORT-COURSE (DOTS)

DOTS is the internationally recommended strategy for TB control. It has five key components:
• **Sustained political commitment** to increase human and financial resources and make TB control a nationwide priority integral to the national health system;
• **Access to quality-assured TB sputum microscopy** for case detection among persons presenting with, or found through screening to have, symptoms of TB (most importantly, prolonged cough);
• **Standardized short-course chemotherapy** for all cases of TB under proper case management conditions, including *direct observation of treatment*;
• **Uninterrupted supply of quality-assured drugs**;
• **Rerecording and reporting system enabling outcome assessment** of all patients and assessment of overall program performance.

When effectively applied, DOTS cures TB, with up to 95 percent cure rate, even in the poorest countries. DOTS prevents new infections among children and adults and also prevent resistance to Anti-TB drugs. According to World Bank report, DOTS is the most cost effective intervention amongst all health related interventions. Government of Pakistan declared DOTS as National emergency in year 2001 and country achieved 100% population coverage (Public sector health facilities) in May 2005.

To achieve indicators, NTP has developed the dynamic interaction between the public and private sectors to epitomize a Public-Private Mix (PPM) in the fight against tuberculosis. The PPM is a strategy designed to increase case detection and synchronize the management of TB cases amongst all TB care providers.

Keeping in view the magnitude of the TB problem in the country, it has become mandatory for National TB control program to collaborate with private medical practitioners with common purpose to provide standardized TB care to the patients in their communities. It is an agreed fact that majority of patients initially attend a private care provider to seek medical advice before TB is suspected and diagnosed. Various studies conducted in low income countries also reveal that private sectors are less aware about TB control strategies with the result that TB patients attending private sector doctors are not being managed according to NTP protocols which not only leads to improper management of TB but also causes risks to the patient and society with emergence of drug resistance due to inappropriate prescription of anti TB drug and interruption in the treatment. Involvement of private health care providers in TB DOTS strategy would not only address the issue of risk associated with the poor management of TB patients but definitely will add in controlling efforts and an increase in case detection and cure rates that will help the TB control program to achieve MDG targets well in time.

**NATIONAL TB CONTROL PROGRAM**

• The National TB Control Program is responsible for overall TB control activities in the country i.e. policy guideline, technical support, coordination, monitoring and evaluation and research
• Provincial TB Control Programs are responsible for the actual care delivery process including program planning, training of care provides, case detection, case management, monitoring and supervision.
• The overall objective of NTP is to reduce mortality, morbidity and disease transmission so that TB no longer a public health problem.
The National targets are in line with the Millennium Development Goals (MDGs) i.e. to cure 85% of detected new cases of sputum smear positive pulmonary TB and to detect 70% of estimated cases once 85% cure rate is achieved.

Presently, free diagnostic and treatment facilities for TB patients are available all over the country within the public sector health care delivery network. Currently, more than 1150 diagnostic facilities and more than 5000 treatment facilities are available throughout the country. NTP has treated more than 800,000 TB patients since 2001 and 234100 TB cases were treated through the DOTS strategy last year. Case Detection Rates (CDR) has increased from 7% in 2001 to 69% in 2007; whereas Treatment Success Rates (TSR) has increased from 77% in 2001 to 87% in 2006 cohort.

**PUBLIC PRIVATE MIX (PPM)**

*A partnership between government and the private sector for the purpose of more effectively providing services and infra structure traditionally provided by the public sector.*

It is widely recognized that a large proportion of TB patients seek care from private providers, mainly outside the network of National Tuberculosis Program (NTP). These include private (for profit and not-for profit) providers and para- stata! healthcare institutions and they do not follow the recommended DOTS strategy for management of TB, hence depriving patients of quality management and treatment.

**Objectives**

- Increase detection of new sputum smear positive (NSS+) 70% cases, conversion rate 95% and cure at least 85% of the registered cases.
- Increase awareness in the target community about TB.
- To help implement, monitor, evaluate and scale up the public-private mix for effective tuberculosis control in the context of devolution in districts.

**How to implement DOTS through PPM**

Case management procedures should be followed by Private provider (PP) including:

- Identification of TB suspects.
- Diagnosis of Pulmonary TB through sputum smears microcopy,
- Patients and their relatives should be educated about TB and treatment,
- TB drugs should be provided free of cost to the patient from the local GP’s clinic,
- Directly observed treatment (DOT) should be arranged for the intensive phase in all smear positives and the whole of the re-treatment regimen
- Defaulters should be traced,
- Record should be completed and updated,
National Tuberculosis Control Programme

It is only by effectively carrying out these activities we will make sure that 8 months treatment is completed, and at least 85% cure rate is achieved.

**PPM organization in the district**

TB care is integrated within Primary Health Care (PHC) services, so that continuing care is provided close to the patient. The strengthening and maintenance of quality services are extremely important involving all levels of healthcare facilities (both public and private) as well as community workers such as LHW, Imam, teacher and health staff.

The following are the recommended organizational arrangements of TB control at district level:

- The Executive District Officer Health (EDOH) has overall technical and administrative responsibilities for TB control activities in the district.
- District TB Coordinator and a Field Officer will coordinate and support TB care in private sector facilities for public-private mix and will provide onsite technical support in case management including record keeping and reporting.
- Ensuring availability of free anti TB drugs to patients attending the private sector / partner facilities.

**The role of health care providers in PPM**

**DISTRICT TB COORDINATOR (PPM COORDINATOR)**

- Focal person for PPM DOTS activities in the district
- Trainings of private health care providers
- Monitoring and evaluation
- Management of drugs and other logistics for Private Providers (PPs)
- Quality Assurance (QA) for laboratories

**PPM FIELD OFFICER**

- Facilitate distribution of drugs and other logistics
- Support PP in recording and reporting
- Record all diagnosed TB cases in TB 03 register

**DOCTOR:**

- Look after PPM DOTS activities in the clinic/ hospital
- Identify suspects.
- Refer suspect for microscopy
- Diagnose TB case
- Prescribe TB treatment and provide free anti TB drugs
- Record cases in TB 01 card
National Tuberculosis Control Programme

- Follow up of TB patients during the treatment
- Identify and supervise treatment supporters
- Inform patients about TB
- Confirm whether patients are cured or not.

DOTS FACILITATOR

DOTS facilitator is a paramedic (Male or female), responsible for:

- Assisting doctor in recording and reporting
- Assisting doctor in identifying of the treatment supporters
- Educate patients about TB
- Ensuring direct observation during the intensive phase of new cases and throughout the whole course in those TB patients who are being re-treated.
- Tracing default cases

TREATMENT SUPPORTER

The treatment supporter is a person who will carry out the direct observation of treatment during the intensive phase of new cases and the whole period of a re-treatment regimen. After the intensive phase, treatment supporters should continue to encourage patients to collect and take their medication till the end of 8 months of treatment. His/her main responsibilities are:

- Collect tablets on monthly basis and safely store
- Directly observe intake of tablets (in right number of drugs and dosage)
- Record daily intake of drugs in Treatment Support Card. The Treatment Supporter reminds patient to visit diagnostic center at the completion of intensive phase
- Remind patient to visit diagnostic center at the completion of intensive phase
- Identify possible side effects and refer
- Discuss difficulties in continued treatment and help resolve them

Laboratory Facility Network

Private practitioners (PP) who have their own laboratory will be designated as diagnostic laboratory for the same clinic. Laboratory technician will be trained in sputum microscopy and recording and reporting tools will be provided by the PTP/DTC.

The PP who have no laboratory in their clinic will be associated to an independent private laboratory in the vicinity in a cluster shape. If there is a need, 3 to 4 such laboratories will be identified and strengthened in districts. PP will send their suspected patients along with sputum request form (TB05) to the designated laboratory. (Sputum containers will be provided by PTP/District) The designated laboratories after the sputum microscopy will send the report on the same form (TB05) to PP through patients. It will be the
National Tuberculosis Control Programme

responsibility of field officer to compare data of private lab and PP to make sure that results of microscopy are conveyed to referring PP. Both types of designated laboratories will:

- keep the record of all cases referred to laboratory for microscopy and maintain a register (TB04)
- Submit the monthly/quarterly reports to DTC
- Store slides for quality assurance as per NTP policy

TB Care Activities at PP Clinic with Laboratory

- Identify and screen TB suspects by sputum smear examination
- Diagnose and prescribe drugs to TB patients according to NTP guidelines
- Provide quality assured TB Drugs to the patients free of cost
- Provide observed treatment
- Do follow up smear examinations
- Trace late patients
- Refer patients with drug reactions to district level hospital
- Maintain Lab register (TB04)
- Maintain patient records, and stock books for drugs and materials

TB Care Activities at GP’s Clinic without Laboratory

- Refer suspect to the cluster clinical lab for sputum Microscopy.
- Provide or arrange community-based observation of treatment
- Supply quality assured TB drugs free of cost
- Maintain case records
- Refer patients with drug reactions to district level hospital
- Refer people for follow up examinations to the clinical lab.
- Identify and trace late patients
- Maintain patient records, and stock books for drugs and materials

Objectives of private practitioner’s training module

- To enable the readers to understand the role of the National TB Control Program and familiarize them with protocols to be followed for diagnosing and successfully treating tuberculosis.
- To make use of the standardized NTP recording and reporting tools for performance evaluation.
- To help in creating greater awareness about the disease in an effort to bring all stake holders on board in the fight against this major public health problem.
DESK-GUIDE

In order to facilitate the implementation of these strategies, a “case management desk guide” has been developed based on WHO materials. The desk guide has been adapted based on the research and piloting experience. The desk guide outlines the process of identifying a TB patient, and continues through all aspects of their management and care until successful completion of treatment.
SESSION 2 - IDENTIFYING A TB SUSPECT

SESSION OBJECTIVES

At the end of the session participants will:

- Recognize the clinical presentation of TB suspects amongst patients presenting with cough.
- Know when and how to request sputum smears, and if necessary chest X-rays in diagnosing pulmonary TB.
- Understand the process of producing, collecting and requesting sputum smear examination.

IDENTIFYING PULMONARY TUBERCULOSIS AMONGST PATIENTS WITH COUGH

Most patients with pulmonary TB develop a persistent cough soon after disease onset. However, cough is not specific to pulmonary TB. Cough is common in smokers and in patients with acute upper or lower respiratory tract infection. Most acute respiratory infections resolve within 3 weeks. Therefore a patient with persistent cough for more than 3 weeks is a pulmonary TB suspect and must submit sputum for diagnostic microscopy.

CRITERIA FOR A TB SUSPECT

National TB Control program uses following criteria for diagnosis of TB patients.

- A patient with persistent cough for 3 weeks or more
- Patients with a cough of less than 3 weeks, or of uncertain duration, are also TB suspects if they also have one or more of the following:
  - Blood stained sputum
  - Fever usually at night
  - Weight loss
  - History of previous TB
  - History of close contact of TB patient

The majority of patients who present with cough of more than 3 weeks (and are identified as TB suspects) are later found to not have TB. There are many other conditions, which can present with prolonged cough, such as pneumonia and asthma. Smokers may have chronic cough, such as those with chronic bronchitis/ chronic obstructive pulmonary disease (COPD).

For these reasons, a TB suspect, who is found not to have TB, must be examined further, a diagnosis made and appropriate treatment given.
National Tuberculosis Control Programme

SUSPECT MANAGEMENT IN PRIVATES SECTOR

Sputum for AFB should be examined for all TB suspects. Three specimens of sputum must always be collected for a TB suspect. This is because some cases of TB will be missed if only one sputum sample is examined.

THE APPROPRIATE USE OF CHEST X RAY

- The chest X-ray is no longer the first line investigation for Pulmonary TB and most patients with TB who are diagnosed by sputum smears do not need a chest X-ray.
- The chest X-ray appearances are not specific to TB. If X-ray is used as the first line investigation for TB there is a possibility of over diagnosis of TB.
- Chest X-ray is only indicated if a patient is found to be sputum smear negative, and there is a need to rule out smear negative pulmonary TB.

EXERCISES

Exercise 1:
Nasir 23-years of age, has fallen ill and comes to the clinic to consult with you. He has complaints of fever and cough for the last 3 weeks. His pulse is 90/min and temperature is 99°F

1. Do you think Nasir is a TB suspect, and if so why?
2. What is the action required?

Exercise 2:
Fatima a 19-year-old housewife comes to the clinic with a bad cough and fever. She used to have cough and was diagnosed TB during summer last year. She took TB medicines from this hospital for about six weeks. She stopped taking treatment because she started feeling better. During the last few weeks she has developed cough again and also produces sputum. The cough is getting worse day by day. However there is no blood in the sputum.

1. Do you think Fatima is a TB suspect, and if so why?
2. What is the action required?

Exercise 3:
Ali is a 25-year-old male, who comes to the hospital to consult with you. He has been sick with cough and fever for almost two weeks. He coughs up some sputum but it is not blood stained. His pulse is 90/min, temperature is 100°F and coarse crepitations (heard mainly in upper zone)

1. Do you think Ali is a TB suspect, and if so why?
2. What is the action required?

Exercise 4:

Please tick the correct answer.

- A person with H/O cough for 3 weeks or more and no other symptom must be examined to exclude TB.
  True/False
- A person with H/O cough for 2 weeks, evening fever and loss of weight must be suspected for TB.
  True/False
- A person with H/O cough of unexplained duration residing/working with a smear-positive patient must be examined to exclude TB.
  True/False

SPUTUM EXAMINATION

Sputum examination is the most specific, cost effective and reliable test for diagnosis of pulmonary TB. Three specimens of sputum must always be collected for a TB suspect. This is because some cases of TB will be missed if less than 3 sputum samples are examined.

- Sputum samples should be collected as follows:
  1. **Spot 1**: This is collected on first consultation
  2. **Early morning**: This is collected at home and this is the early morning sputum sample collected the day after consultation.
  3. **Spot 2**: This is collected at the lab on the same day when the morning specimen is submitted.

Quality of sputum

Steps for taking good sputum samples are as follow:

- Good quality specimens contain sputum, not saliva. It is important to collect a good sputum specimen in order to make sure that any bacteria present are identified.
- A good quality specimen is obtained by explaining and demonstrating to the patient how to take in a deep breath and cough deeply in order to bring up sputum.

Steps for taking good sputum samples are as follows:

**Step 1**: Fill in the TB laboratory form (TB05).
The doctor should fill in The TB05 and the patient is sent to the laboratory for sample collection.

**Step 2**: Label the sputum container
The laboratory technician will write the laboratory serial number on the sputum containers and not on the lid and/or cover of the sputum containers.

**Step 3: Explain specimen collection**
Laboratory technician will explain carefully and demonstrate how to breathe deeply and cough. The patient must produce sputum, not saliva.

**Step 4: Find a suitable space to collect the specimen**
- If possible the specimen should be collected outside or in a well-ventilated area, away from other people
- Do not collect the sputum while others are watching
- Let the person rinse his/her mouth with water
- Do not stand in front of the patient

**Step 5: Collect the specimen**
Laboratory technician should supervise the collection of sputum and follow following steps:
- Give the patient the container without lid
- Hold the lid himself
- Ask the patient to breathe deeply and cough
- Ask the patient to spit carefully into the container, and not to contaminate the outside of the container
- Give the patient the lid immediately to screw on tightly and ask him to check that the lid is tight
- Ask the patient to wash his/her hands and also wash his hands

**Request for sputum smear examination (TB05)**
The TB05 form is used to send a request for sputum microscopy. Sputum smear results are reported on TB05 form (result section) by the laboratory staff. The doctor on the basis of sputum results will diagnose the TB patients as per NTP guideline: A sample of TB05 is given below.
### Request for Sputum Smear Microscopy Examination

The completed form with results should be sent promptly by laboratory to the referring facility.

**Name of BMU (Diagnostic Center):** ___________________________________________________

**Referring facility:** ___________________________  **Date:** ___________________________

**Name of patient:** ____________________________________________  **Age:** ______  **Sex:**  □ M  □ F

**Complete address:** ___________________________________________________

**Reason for sputum smear microscopy examination:**

- [ ] Diagnosis
- [ ] Follow-up  **Number of month of treatment:** ______  **BMU TB Register No.:** __________

**Name and signature of person requesting examination:** ___________________________

1. Including all public and private health facility/providers
2. Be sure to enter the patient’s BMU TB Register No. for follow-up of patients on chemotherapy

### RESULTS (to be completed in the laboratory)

**Laboratory Serial No.:** _____________________________________________________

<table>
<thead>
<tr>
<th>Date Examined</th>
<th>Sputum Specimen</th>
<th>Visual appearance</th>
<th>RESULTS</th>
</tr>
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<tbody>
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<td>3</td>
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</tr>
</tbody>
</table>

3. To be completed by the person collecting the sputum
4. Blood-stained, muco-purulent, saliva

**Examined by:** ___________________________________________________

**Date:** ____________________________  **Signature:** __________________________________

### TB 05 form

The TB05 form is used to send a request for sputum microscopy and to receive results for diagnosis and follow-up.

**REQUEST SECTION:** (to be filled in when a patient is sent to the laboratory for sputum microscopy)

**Name of the BMU:** It is the name of health facility where TB case management is carried out and a lab or associated laboratory services for sputum microscopy are present.
Referring facility: It is facility, which is referring TB case for diagnosis. It may be same GP clinic or any other private care provider.

Date: This is the date when first spot sputum sample is collected.

Patient name: Name in full

Age: Write the reported or estimated age of the patient

Sex: Tick the appropriate box i.e. in case of male patient Tick M and in the case of female Tick F

Address: Complete address of the patient

Patients (BMU) TB No: It is written only for the already registered TB patients who come for follow-up visits during treatment.

Reason for diagnosis: This may be for diagnosis or follow up. In case of follow up, record the month of treatment.

Name of person requesting examination: Please write the name of person requesting sputum examination.

Signature: signature of the in-charge of the health center. If a patient has been referred from another center then the in-charge of the BMU will counter sign the TB 05.

Result: Laboratory serial number is given, which is same for three specimens. Results of the microscopy are recorded in relevant columns Date of examination is mentioned in first column and then sputum specimen, visual appearance and result is recorded. Name of the person examining the smears will be recorded in the column Examined by and he will put signature in relevant column. Date of completion of from will be entered.

EXERCISES

Exercise 1:

You are a doctor sitting at a clinic in Bara Kahu (a designated PPM center). Today is July 13, 2008. Ms. Shamim a 19-year old housewife from Sari Town, Dak Khana Sari, Tehsil and district Islamabad, has come to consult and you think she is a TB suspect. Now fill in the request section of TB 05.
### Request for Sputum Smear Microscopy Examination

The completed form with results should be sent promptly by laboratory to the referring facility.

<table>
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<tr>
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<tr>
<th>Name of patient</th>
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<th>Sex: M</th>
<th>F</th>
<th>Referring facility</th>
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<tr>
<th>Complete address</th>
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</table>

Reason for sputum smear microscopy examination:

- [ ] Diagnosis
- [ ] Follow-up  Number of month of treatment: _____  BMU TB Register No. 2

Name and signature of person requesting examination

1. Including all public and private health facility/providers
2. Be sure to enter the patient’s BMU TB Register No. for follow-up of patients on chemotherapy

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3. To be completed by the person collecting the sputum
4. Blood-stained, muco-purulent, saliva

Examined by

Date ____________________________  Signature _______________________________________

### Exercise 2:

You are a care provider sitting at a clinic in Jagiot Town. Today is July 2, 2008. Mr. Jamil, a 23-year old businessman from Jagiot Town, tehsil and district Islamabad, has come to consult and you think he is a TB suspect (associated laboratory is Labex).

Now fill in the request section of TB 05.
# Request for Sputum Smear Microscopy Examination

The completed form with results should be sent promptly by laboratory to the referring facility.

**Name of BMU (Diagnostic Center):** _______________________________________________________

**Referring facility:** _______________________________________________________

**Date:** ___________________

**Name of patient:** ____________________________________________  **Age:** ______  **Sex:**  □ M  □ F

**Complete address:** __________________________________________________________________

**Identification information:**

- **Referring facility:** 1 ____________________________  2 ____________________________

**Date:** ___________________

**Reason for sputum smear microscopy examination:**

- **Diagnosis**  □
- **Follow-up**  □

**Number of month of treatment:** ______  **BMU TB Register No.:** 2 ________________

**Name and signature of person requesting examination:** ____________________________

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1. Including all public and private health facility/providers
2. Be sure to enter the patient’s BMU TB Register No. for follow-up of patients on chemotherapy

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**Examined by:** ________________________________________________________________

**Date:** ____________________________  **Signature:** ______________________________________
SESSION 3 - DIAGNOSING A TB PATIENT

SESSION OBJECTIVES

At the end of the session, the participants will be able to:

- Reading and Interpreting of sputum smear results
- Classify the disease into pulmonary and extra-pulmonary tuberculosis
- Ascertain previous intake of TB drugs, and decide the type of pulmonary TB patient

READING SPUTUM SMEAR RESULTS:

Sputum smear results are reported on the TB05 form (result section) by the laboratory staff. The doctor at the clinic/hospital will see the report to decide further action according to these results. Specimen 1, 2 and 3 refers to three specimens collected for the laboratory examination of TB suspects.

The results column refers to result of each sputum smear examined. The smear results are reported either as positive or negative. In this column, “POS” is written to record a positive result, and “NEG” is written to record a negative result.

Positive grading refers to grading according to number of acid fast bacilli (AFB) on the slide. The laboratory person will tick the appropriate positive grading column for each smear reported “POS”. The positive grading is done according to WHO criteria given in the table below:

<table>
<thead>
<tr>
<th>If the slide has:</th>
<th>Results</th>
<th>Positive (grading)</th>
<th>Remarks (Bacterial load)</th>
</tr>
</thead>
<tbody>
<tr>
<td>More than 10 AFB per field</td>
<td>POS</td>
<td>3+</td>
<td>Heavy</td>
</tr>
<tr>
<td>1 to 10 AFB per field</td>
<td>POS</td>
<td>2+</td>
<td>Medium</td>
</tr>
<tr>
<td>10 to 99 AFB per 100 fields</td>
<td>POS</td>
<td>1+</td>
<td>Low</td>
</tr>
<tr>
<td>1 to 9 AFB per 100 fields</td>
<td>POS</td>
<td>Record exact number</td>
<td>Very Low</td>
</tr>
<tr>
<td>No AFB per 100 fields</td>
<td>NEG</td>
<td></td>
<td>Nil/Not seen</td>
</tr>
</tbody>
</table>

DIAGNOSING A TB CASE AT GP CLINIC

Once the results of sputum examination are available, the doctor at GP clinic will make a diagnosis using following NTP guidelines

If two or more positive sputum smears
- Declare sputum positive pulmonary TB

If one sputum positive, Send for X-ray- chest and
- If X-ray consistent with active pulmonary TB
- Declare sputum positive pulmonary TB
If X-ray not consistent with active pulmonary TB
- Give antibiotic for 7 days, repeat sputum after 7 days, and re-assess
- If one or more smear positive, declare sputum positive pulmonary TB
- If no smear positive, refer to hospital specialist

If all three sputum smears found negative
- Give antibiotic for 7 days, clinically assess after 7 days, send for X-ray (if required)
- If X-rays consistent with active pulmonary TB, and patient found still ill
- Declare the patient as sputum negative pulmonary TB

If X-rays are not consistent with active pulmonary TB
- The patient found still ill after taking a full course of antibiotics, then
- Refer to hospital for specialist opinion
Management of TB at the Private Clinic/ Hospital
(TB suspects: Cough for more than three weeks with or without other symptoms)

Thee Sputum Smear

- Two or more smear positive:
  - Declare sputum positive pulmonary TB & Start treatment
  - If Smear positive:
    - Give Broad-spectrum antibiotics for 7-10 days and repeat 3 sputum smears
  - If 3 smear negative:
    - Refer to TB specialist/ district physician

- One Sputum smear positive:
  - Chest X Ray (CXR)
  - If CXR Consistent with active TB:
    - No response to antibiotics
    - CXR
      - If CXR changes are not Consistent with active Pulmonary TB:
        - Refer to TB specialist/ district physician
      - If CXR changes are consistent with active Pulmonary TB*:
        - Declare smear negative pulmonary TB & Start treatment
  - If CXR not consistent with active PTB:
    - Response to antibiotics
    - Re-assure

- All three Sputum smear negative:
  - Give Broad-spectrum antibiotics for 7-10 days and re-assess
EXERCISES

Please answer the following questions:

- How many sputum smears are required for diagnosis of TB
  Answer:

- At what times sputum specimens are collected
  Answer:

- How many sputum specimens must be positive for AFB to diagnose a patient as Sputum Smear Positive (SS+) case of Pulmonary TB
  Answer:

- How many sputum specimens must be negative to exclude smear-positive TB
  Answer:

- Which are the three main requirements to diagnose a case as suffering from Smear Negative Pulmonary TB
  Answer:

- In what conditions patients are referred to chest specialist
  Answer:
DISEASE SITE

In general, recommended treatment regimens are similar irrespective of disease site. The importance of defining site is for recording and reporting purposes. The site of disease can be divided in 2 components - Pulmonary or Extra-pulmonary

Pulmonary TB:

Pulmonary TB refers to disease involving the lung parenchyma.

Extra Pulmonary TB:

In case of extra-pulmonary tuberculosis, the body site mainly affected by disease is also noted. A relevant specialist will make the diagnosis of extra-pulmonary TB. The reason of diagnosis (Bacteriological and or histological) will also be mentioned on the referral form. The copy of investigation reports should be sent back to the referral units and attached with TB01 of patient.

In case both Pulmonary and extra-pulmonary sites are involved, the case will be registered as Pulmonary in TB01, TB02 and TB03.

TYPE OF TB PATIENT

At the time of registration the doctor shall decide the “patient type” on basis of history of TB drug intake in past. TB patients are divided into six types and treated in two categories based on previous history of treatment and current sputum results.

Following are the various types, one of which is given to a TB patient:

New Case: If patient has never taken treatment for tuberculosis or has taken anti-tuberculosis drugs for less than four weeks in the past.

Relapse: If patient declared cured or treatment completed in the past, again has a positive sputum smear.

Transferred In: A patient who has been transferred from another TB register to continue treatment.

Treatment Failure: If patient while on treatment is sputum smear positive 5 months or later during the course of treatment. OR Smear negative patient found smear positive at completion of 2 months treatment.

Return after default: If patient returns to treatment after interrupting treatment for two months or more.

Others: Patients who do not fit in the above mentioned types such as patients known to have taken TB drugs for more than 4 weeks from outside the program. There may be other positive or other negative cases.
### History of drug intake

<table>
<thead>
<tr>
<th>Type of patient</th>
<th>Smear result now</th>
<th>Type of patient</th>
</tr>
</thead>
<tbody>
<tr>
<td>Never taken TB drugs in past</td>
<td>Smear positive</td>
<td>New case</td>
</tr>
<tr>
<td>Taken TB drugs for less than 1 month in past and never registered in TB-DOTS program</td>
<td>Smear negative</td>
<td>New case</td>
</tr>
<tr>
<td>Taken full course of TB treatment in past and declared cured or treatment completed</td>
<td>Smear positive</td>
<td>Relapse</td>
</tr>
<tr>
<td>Taken TB drugs and transferred from another TB Register</td>
<td>Smear positive smear negative</td>
<td>Transferred-in</td>
</tr>
<tr>
<td>New smear positive patient taken TB drugs for 5 months or more</td>
<td>Smear positive</td>
<td>Treatment Failure</td>
</tr>
<tr>
<td>Smear negative patient having taken TB drugs for 2 months or more</td>
<td>Smear negative</td>
<td>Treatment Failure</td>
</tr>
<tr>
<td>Patient registered in program and then interrupted for 2 or more consecutive months</td>
<td>Smear positive</td>
<td>Treatment after default</td>
</tr>
<tr>
<td>All Patients who do not fit in the above definitions</td>
<td>Smear positive Smear negative</td>
<td>Others</td>
</tr>
</tbody>
</table>

### EXERCISES

#### Case A:
Ayesha was treated for pulmonary tuberculosis and declared cured four years back. Now on examination her sputum smears are found positive.

Type of patient (Ayesha) is: ____________________________

#### Case B:
Rajab was diagnosed and registered as a new sputum smear positive case of tuberculosis in a neighboring district. He has migrated to your area with a transfer form and TB02 card.

Type of patient (Rajab) is: ______________________________

#### Case C:
Atif took anti-TB drugs for two months from a government hospital and then stopped taking treatment for about three months. He has now returning for treatment.

Type of patient (Atif) is: _________________________________

#### Case D:
Salma took anti-TB drugs for about six weeks from a private practitioner three months back. Now on examination her sputum smears are found positive.

Type of patient (Salma) is: _______________________________
Case E:

Manzoor was diagnosed as sputum smear negative case of tuberculosis. At completion of two months treatment his smears were found positive.

Type of patient (Manzoor) is: ________________________________

Case F:

Rabia was diagnosed and treated as smear positive pulmonary tuberculosis. At the end of five months of regular treatment her smears were found positive.

Type of patient (Rabia) is: ________________________________
SESSION 4 - TREATMENT OF TUBERCULOSIS

SESSION OBJECTIVES

At the end of the session, participants will be able to:

- Correctly categorize TB patients on the basis of sputum results and history of previous drug intake, and severity of disease.
- Correctly prescribe TB treatment according to the category of the patient
- Registering of TB patient

CATEGORIES OF TB PATIENTS

Categorization of TB patients helps to simplify and standardize drug prescription. The categorization of patients in two categories is based on type of patients.

Category 1:

This includes new cases of pulmonary (positive or negative), extra-pulmonary TB and “other” smear negative and extra pulmonary patients.

Category 2:

This includes smear-positive relapses, failure, Treatment after default and other smear positive patients who have received anti TB treatment for more than one month without being registered.

PRESCRIBING DRUGS TO TB PATIENTS

TB patients must be treated with the anti-tuberculosis drug regimens recommended by National TB Control Programme (NTP) Pakistan. The NTP recommended drug regimens are very effective and can treat successfully almost all cases of tuberculosis if used in the right dosage and for the right duration. The most important drugs used in the treatment of Tuberculosis are Isoniazid (H), Rifampicin (R), Pyrazinamide (Z), Streptomycin (S) and Ethambutal (E). The uninterrupted availability of proven quality and effective ATT drugs should be ensured and must be provided free of charge. NTP recommends the use of Fixed Dose Combinations (FDCs) which are recommended by WHO; especially ensuring the proven bio-availability of Rifampicin in Rifampicin containing FDCs. FDCs are convenient to dispense to and use by the patient. However, Short Course Chemotherapy (SCC) should be used only under proper management conditions, which includes measures for directly observed therapy (DOT), especially for Rifampicin-containing regimens.

Intensive phase:

The initial (intensive) phase lasts usually for 2 – 3 months. Four or more anti-TB drugs (including Rifampicin) are given to kill TB bacilli rapidly. The vast majority of patients
become non-infectious and symptoms improve within 2 months. Directly Observed Treatment (DOT) during the intensive phase ensures that TB drugs are taken and it prevents the development of resistance to Rifampicin. The risk of drug resistance is higher during the early stages of anti-TB drug treatment when there are more TB bacilli.

**Continuation phase:**

The continuation phase lasts for 5 – 6 months. Fewer drugs (i.e. two or more) are required to eliminate the remaining TB bacilli. Frequent supervision rather than direct observation during continuation phase (except in re-treatment cases) helps to ensure success. The risk of drug resistance is less during the continuation phase when there are fewer TB bacilli.

Fixed dose combination (FDC) tablets, with proven bioavailability, are preferred over individual drug preparations. The expected advantages of prescribing FDCs include:

- a) less prescription errors, mainly due to simple and easy dosage recommendation and adjustment
- b) better patient adherence, due to lesser number and types of tablets to ingest.

The potential disadvantages include:

- a) difficulty to maintain optimum dosage of individual drugs across various patient-weight categories
- b) difficulty to manage patients showing reaction/side effects to any one particular drug.

The recommended FDCs currently used in the programme are:

<table>
<thead>
<tr>
<th>Drug Combination</th>
<th>Preparation/ Strengths (available)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Isoniazid + Rifampicin + Pyrazinamide + Ethambutal (HRZE)</td>
<td>75 + 150 + 400 + 275 mg</td>
</tr>
<tr>
<td>Isoniazid + Rifampicin + Ethambutal (HRE)</td>
<td>75 + 150 + 275 mg</td>
</tr>
<tr>
<td>Isoniazid + Ethambutal (HE)</td>
<td>150 + 400 mg</td>
</tr>
<tr>
<td>Isoniazid + Rifampicin (HR)</td>
<td>100 + 150 mg</td>
</tr>
</tbody>
</table>

**TREATMENT REGIMENS**

The dosage of fixed dose combination and individual drugs for each category of treatment are given in the following tables:
Table 1 Regimen (Category – I) dosages with fixed-dose combinations in adults

<table>
<thead>
<tr>
<th>Patient body Weight (kg)</th>
<th>Initial intensive phase daily (2 months)</th>
<th>Continuation Phase daily (6 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RHZE (R 150 mg + H 75mg + Z 400mg + E 275mg)</td>
<td>HE (H 150mg + E 400mg)</td>
</tr>
<tr>
<td>30-39</td>
<td>2</td>
<td>1.5</td>
</tr>
<tr>
<td>40-54</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>55-70</td>
<td>4</td>
<td>3</td>
</tr>
<tr>
<td>&gt;70</td>
<td>5</td>
<td>3</td>
</tr>
</tbody>
</table>

H = Isoniazid  R = Rifampicin  Z = Pyrazinamide  E= Ethambutal

Table 2 Regimen (Category – II) dosages with Fixed-dose combinations in adults

<table>
<thead>
<tr>
<th>Patient body Weight (kg)</th>
<th>Initial intensive phase daily (3 months)</th>
<th>Continuation Phase daily (5 months)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>RHZE (R 150 mg + H 75mg + Z 400mg + E 275mg)</td>
<td>Streptomycin (750mg) (only for initial 2 months of intensive phase)</td>
</tr>
<tr>
<td>30-39</td>
<td>2</td>
<td>500 mg</td>
</tr>
<tr>
<td>40-54</td>
<td>3</td>
<td>750 mg</td>
</tr>
<tr>
<td>55-70</td>
<td>4</td>
<td>750 mg</td>
</tr>
<tr>
<td>&gt;70</td>
<td>5</td>
<td>750 mg</td>
</tr>
</tbody>
</table>

* If HRE is not available, then use HR+E

Duration of chemotherapy

- Recommended duration of treatment is 8 months.
- Prolonging chemotherapy beyond the recommended period has no additional benefits.
- Chemotherapy may need to be temporarily suspended or stopped in case of severe drug intolerance or toxicity.
- It is very important to treat TB with the correct dosage of recommended drugs. TB medicines are not effective if they are not given in the correct dose and according to the weight group of the patient. If the dose prescribed is less than the recommended dose, TB bacteria will not be killed and they may become resistant to the drugs. If the dose is higher than recommended, the drugs may cause severe toxic effects.
- Always remember that if a patient’s weight changes during the course of treatment, his treatment regimen should not be modified. In the case of children with TB; if they increase their body weight; the dosage should be adjusted according to the new body weight.

REGISTERING TB PATIENTS

Recording and reporting is an important component of DOTS strategy. NTP has developed a set of tools for recording and reporting of TB patients. All tuberculosis patients must be registered in TB register by PPM field officer. The staff at the clinic (doctor/ or paramedic) will fill relevant part in TB 01 and TB 02 cards.
INTRODUCTION TO TB01 FORM

TB01 form is filled for every newly diagnosed TB patient. This card contains important administrative and technical details about the patient and his/her treatment. Data from TB01 form is transferred to the TB Register by PPM field officer, which is basis for program monitoring and quarterly reporting.

TB01: Front side

Patient name:
Write the patient's name in full.

Father’s/Husband’s name:
Write the father's name if patient is either a male or an unmarried female. Write the husband's name if patient is a married female.

Sex:
Tick the appropriate box i.e. In case of male patient Tick “M” and in case of female tick “F”.

Age:
Write the reported or estimated age of the patient

Date of registration:
Write the date on which the patient is registered and TB01 form is prepared and treatment is started e.g. 20-05-2000
National Tuberculosis Control Programme

**Note:** If patient is “transferred in”, then record the date when he has started the treatment at first facility.

**Name of contact person**
A person who can be contacted in case patient can not be located.

**Name of treatment center**
Write down the nearest health facility, from where patient will take treatment. In case of GP clinic, the BMU will act as treatment center.

**Name of treatment supporter**
Name of the person who will ensure the intake of drug by the patient.

**Regimen and dosage:**
Mention category (I or II) and number of tablets/ inj. in relevant boxes.

**Referred By:**
Tick the appropriate box.

**Recording disease site and type of patient**

Put a Tick “✓” in the appropriate box to record the disease site (Pulmonary or extra pulmonary). In case of extra pulmonary TB, mention the site of the disease evidence of disease confirmation (Histological and/or bacteriological). Tick the appropriate box for type of patients.

**Recording smear results on TB01 form**

In the “month” column, write the treatment month of the patient in which sputum examination is carried out NOT the calendar month. According to the NTP protocol sputum examination should be held at months: pre-treatment 0, and at the end of 2 or 3, 5 and 7 months.

The date of first smear examination and laboratory serial number is transferred from the TB05 and/or TB04 to TB01 form. The weight of the patient and results of other investigations, if advised, including X-rays are also recorded in the appropriate columns (e.g. chest X-rays found consistent with active pulmonary tuberculosis can be recorded as “CXR Pos.”).

The sputum smear results are recorded in the “smear” column of the TB01 form. “NEG” is written under the smear column for negative results, and positive grading is recorded for the positive results i.e. 3+, 2+, 1+ and write exact number of AFBs in case of 1-9 per 100 HPF.

In case of pre-treatment examination where three smears are examined, the highest positive grading obtained in any of the smears is recorded on the TB01 form. Write CXR done or not.
Enter the delivery of the drugs to the patients. Put X on day when drugs are collected and draw a horizontal line through the number of days supplied.

<table>
<thead>
<tr>
<th>II. CONTINUATION PHASE</th>
<th>A D U L T</th>
<th>C H I L D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of tablets per dose</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Daily supply: enter ✓. Periodic supply, enter X on (day) when drugs are collected and draw a horizontal line through the number of days supplied; O = drugs not taken

<table>
<thead>
<tr>
<th>Day</th>
<th>Month</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td></td>
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<td>5</td>
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<td>6</td>
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<td>29</td>
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<tr>
<td>30</td>
<td></td>
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<tr>
<td>31</td>
<td></td>
</tr>
</tbody>
</table>

(Household) CONTACTS*

<table>
<thead>
<tr>
<th>Name of contact</th>
<th>Age</th>
<th>Sex</th>
<th>Method of Screening</th>
<th>Date &amp; Result of screening</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

*Joint International Review mission (July 2008) recommended Screening of all Sputum Smear Positive (SS+) contacts

**TB01: Back side**

Continuation phase

Record the number of tablets per dose in the relevant box for adults and children.

Enter the delivery of the drugs to the patients in continuation phase. Put X on day when drugs are collected and draw a horizontal line through the number of days supplied. The lower section is divided into two sections.

Household contacts

1st section is related to the contact screening. NTP recommend contacts screening of TB cases especially all smear positive TB cases. Under five children and symptomatic adults should be screened for TB by the relevant diagnostic tool and results should be recorded in this section of TB 01. There are columns for name, age, methods of screening, date and result of screening. It is suggested that Registration number for confirmed diagnosed TB cases can be written in remarks column and thus the diagnosed cases by contacts screening can be identified. In case more than eight contacts, separate paper sheet can be stitched to the TB01 card of patient.
Comments:

This section on lower part of backside of the TB01 is an important part of the form. The comments related to the following four main areas are recorded in this section:

**Diagnosis:** Any special measure and/or result of a test which has played a role in diagnosis of the patient and is not recorded elsewhere in TB01. These may include X-ray finding of seriously ill patients, tests at the reference laboratory.

**Chemotherapy:** In case of TB patient this may include the date continuation phase started; comments on side effects of drugs, hyper-sensitivity to drug(s), stopping of Streptomycin at two months etc. The chemotherapy of household contacts, if done, is also recorded.

**Follow-up:** This may include comments on retrieval action taken, if any.

**Others:** Any other important event related to treatment and/or its outcome can also be recorded.

We will now move on to recording the sputum smear results, classification and type of disease on the front side of the TB01 form.??

**Treatment outcome**

Write date of outcome and tick the appropriate box.

**EXERCISES**

**Exercise 1**

It was January 5, 2006 when Mr. Murshid s/o Mr. Akber resident of Lucky Mohalla Shan Street Gharo city district Thatta aged 25 years reported to your clinic with complaints of cough and low grade fever since last 4 weeks. After taking history, Mr Murshid was advised sputum examinations according to NTP guidelines to exclude TB. The sputum report was reported as under

<table>
<thead>
<tr>
<th>Lab serial no: 001</th>
</tr>
</thead>
<tbody>
<tr>
<td>Date</td>
</tr>
<tr>
<td>5-1-2006</td>
</tr>
<tr>
<td>6-1-2006</td>
</tr>
<tr>
<td>6-1-2006</td>
</tr>
</tbody>
</table>

Based on sputum results, Mr Murshid was diagnosed as smear-positive cases of TB. Please fill the TB 01 from below:
Exercise 2

Mr. Murshid revealed that he has taken anti-TB drugs for 20 days in the past from a general practitioner. Determines the type of patient and tick the relevant box in TB01. The weight of the patient is 45 kg; Prescribe treatment for the patient. You use FDC drugs for treatment of TB cases. His treatment was started on January 06, 2006 according to NTP guidelines. As per NTP policy, drugs are issued to treatment supporter during intensive phase and to patient during continuation phase on monthly basis. Miss Khalida LHW residing in same Mohalla agreed to supervise the intake of drugs by the patient. Her tell no. is 223344; Miss Khalida collected drugs from your clinic, that is also treatment center for patient Mr. Murshid. Please record the collection of drugs in the card for the 1ST month of treatment.
Exercise-3
Suleman has been diagnosed as sputum positive case of pulmonary TB. He has taken TB drugs for three weeks from a General practitioner. His weight is 43 kg, in which category Mr. Suleman will be placed. Prescribe treatment for intensive phase. The clinic uses 4-FDC drugs during intensive phase of treatment.

CAT (I, II):

Number of tablets (per dose) and dosage of Streptomycin:

Exercise-4
Mr. Ghauri was registered as pulmonary negative case at your clinic on March 10, 2008. He left treatment on April 15 and has again reported to you for treatment on June 20, 2008. His sputum for AFB on June 20, 2008 is 2+. His weight is 56 kg, in which category Mr. Ghauri will be placed. Prescribe treatment for intensive phase. The clinic uses 4-FDC drugs during intensive phase of treatment.

CAT (I, II):

Number of tablets (per dose) and dosage of Streptomycin:
TB PATIENT CARD (TB02)

The patient card (TB02) contains essential general information about the patient and specific medical information about the patient’s diagnosis and treatment. This card is kept with the patient. The person (either patient or supporter or family member) who visits the hospital/ clinic in relation to patient’s treatment (for drug collection, advice etc.) carries this card.
**Tuberculosis Identity Card**

Name ____________________  Patient Registration No.:________

Address ____________________  Date of registration: __________

Sex: □ M  □ F  Age ______  Date treatment start ______

Name of Diagnostic Center ______________________________________

Name of Treatment Center ______________________________________

<table>
<thead>
<tr>
<th>Sputum smear microscopy</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td>Date</td>
</tr>
<tr>
<td>0</td>
<td></td>
</tr>
<tr>
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<table>
<thead>
<tr>
<th>Disease site</th>
<th>tick one</th>
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<tbody>
<tr>
<td>□ Pulmonary</td>
<td></td>
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<tr>
<td>□ Extrapulmonary, specify ______</td>
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<table>
<thead>
<tr>
<th>Type of patient</th>
<th>tick one</th>
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<tbody>
<tr>
<td>□ New</td>
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<tr>
<td>□ Relapse</td>
<td></td>
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<tr>
<td>□ Transfer in</td>
<td></td>
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<tr>
<td>□ Other specify</td>
<td>________</td>
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</table>

**Date of Appointment for drugs Collection**

<table>
<thead>
<tr>
<th>Current</th>
<th>Next</th>
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</table>

**Appointment for follow – up sputum examination**

<table>
<thead>
<tr>
<th>Date</th>
<th>Place of examination</th>
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<tbody>
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</table>

**Treatment Outcome**

<table>
<thead>
<tr>
<th>Date treatment Stopped</th>
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</table>

**REMEMBER**

**Important Instructions for the patient**

1. This is an important card, keep it with care.
2. Bring this card when you come to see doctor, collect drugs or get sputum examined.
3. TB is a curable disease.
5. Regular intake of drugs is essential for the health facility nearest to your place.
6. Get TB drugs, free of cost, for the health facility nearest to your place.
7. Must visit the health facility on due (date of appointment).
8. If you cooperate, you will get cured (Insha- Allah).
TB02: Side 1
This part includes the general information and part of medical information. The general information on side 1 of TB02 includes: the patient’s name, address, sex, age, district TB number, name of the diagnostic and treatment centers responsible for the patient; the date treatment started. The medical information includes the disease classification and type of patient. All information on Side1 of TB02 (both general and medical) are transferred from TB01 card to the TB02 at the time of registering a TB patient.

TB02: Side 2
This side contains all the medical information about the patient’s diagnosis and treatment, including patient category, drugs prescribed and sputum smear results. The DOTS Facilitator at the diagnostic center will transfer all this information TB01 to TB02, at the time of registering the TB patient.

TB02: Side 3
The DOTS Facilitator, at treatment center, will record the date of the current and next monthly appointment at the treatment center. The patient and/or his treatment supporter will visit the treatment center on monthly basis for clinical review and to collect his/her drugs. If the patient chooses to have direct observation at the treatment center then he/she will be coming daily to see their treatment supporter as well as his/her monthly visit. The date of the next appointment at the treatment center is calculated by adding one month to the current date of the patient’s visit to the treatment center. For example if a patient visits the treatment center would be the 13th of February 2000, the date of the next appointment at the treatment center would be the 13th March 2000. If the 13th of March is found to be a holiday, then the next working day should be used instead. The remarks section of TB02 is used to record the extension of intensive phase for one more month and stopping of streptomycin at the end of 2nd month (Cat II).

TB02: Side 4
Instructions for the patient mentioned on this side in Urdu language for easier understanding and to remember on finger tips.
Tuberculosis Program

**TB REGISTER (TB03)**

All patients diagnosed with TB must be recorded in the TB Register. The TB register helps to keep track of all the TB patients in the area/district. PPM field officer regularly visits PP and record all diagnosed cases in TB 03.

The patient’s treatment card (TB01) is the main source of information to be recorded in TB Register (TB03). Quarterly reports on case finding and treatment outcomes are based on information obtained from the TB Register (TB03).
<table>
<thead>
<tr>
<th>Date of registration</th>
<th>Patient Registration No.:</th>
<th>Name (S/o; D/o; W/o)</th>
<th>Sex (M/F)</th>
<th>Age</th>
<th>Complete Address</th>
<th>Name of Treatment Center¹</th>
<th>Date treatment started</th>
<th>Treatment category Cat-I / Cat-II²</th>
<th>Site P/EP</th>
<th>Type of patient ³</th>
</tr>
</thead>
<tbody>
<tr>
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</tbody>
</table>

Footnotes appearing on first page of the register only (left side of register book)
### Tuberculosis Register – (TB 03) Right side of the register book

<table>
<thead>
<tr>
<th>Results of sputum smear microscopy and other examination</th>
<th>Treatment outcome and date</th>
<th>Number of TB cases detected through contacts screening&lt;sup&gt;3&lt;/sup&gt;</th>
<th>No. of confirmed TB cases</th>
<th>Remarks</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Sputum Smear Microscopy Before treatment</strong></td>
<td><strong>FOLLOW UP SPUTUM EXAMINATIONS</strong></td>
<td><strong>No. of contacts screened</strong></td>
<td><strong>No. of confirmed TB cases</strong></td>
<td><strong>Remarks</strong></td>
</tr>
<tr>
<td>Sputum smear microscopy result&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Lab. No.</td>
<td>Sputum smear Microscopy result&lt;sup&gt;2&lt;/sup&gt;</td>
<td>Lab. No.</td>
<td>Sputum smear micro-copy result&lt;sup&gt;2&lt;/sup&gt;</td>
</tr>
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</table>

### Notes:

1. First follow up at the end of 2<sup>nd</sup> month for NSS+ cases and at the end of 3 month for those NSS+ not converted at 2 month and for CAT 2 patients.
2. Mention the result as NEG, 1-9, +, ++, +++.
Left side of district TB register

Date of Registration
The date of registration refers to the date on which the patient is registered in the TB03. Usually, the patient should be registered in the TB03 on the day of initiating the treatment, in which case the date of registration would be the same as date started treatment. The date should be recorded in the format dd/mm/yy (day/month/year).

Patient TB Number
Each registered TB patient is given a three digit (e.g. 001) TB number. The TB Number will be given at the diagnostic center, when the TB patient is registered. It is given on the yearly basis.

Other information recorded in the left side of TB Register
For each newly registered patient, the TB number, name of the patient, sex, age and address of the patient, name of the treatment center, start date of treatment and category, disease site and patient type should be recorded. This information is obtained from the TB01 card. The disease site is recorded by writing “P” for pulmonary and “EP” for extra-pulmonary tuberculosis. The type of patient is recorded by using the following abbreviations: N for New; R for Relapse; F for treatment after failure, D for treatment after default, T for transferred in and O for others (i.e all those cases which do not fit in the above mentioned patient types).

Right side of TB Register: Results of sputum examination and the treatment outcome
On the right side of the register, sputum smear results at the start of treatment and completion of the 2nd, 5th and 7th month of treatment is recorded. The sputum results should be recorded in the relevant month column (0, 2, 5 and 7) and lab number is also mentioned in next column after each result. Treatment outcome is also mentioned in the right side of the TB 03 register and date of stoppage of treatment is mentioned in the relevant column.

Contacts Screening:
This block has been divided in 2 columns. Write down the total contacts screened out for each registered TB case in the first column. Mention the number of confirmed TB cases in the 2nd column.

Remarks:
Remarks is the last column in TB03 form. The comments to be recorded in this space may include the registration number of confirmed TB cases detected through contact screening, name of Treatment Supporter and information about patients transferred-out, re-registered after default or failure.
SESSION 5 - EDUCATING TB PATIENTS AND MANAGING CONTACTS

SESSION OBJECTIVES

At the end of the session the participants will:

- Know the key messages to be delivered to a TB patient, at the time of registration
- Be able to identify and manage household contact(s) of TB patients

KEY MESSAGES FOR TB PATIENTS

When a TB patient has been diagnosed, the doctor should provide the patient with key messages about the diagnosis and treatment of TB. The DOTS Facilitator will supplement this information by providing more information about TB, its spread, treatment and follow-up. Following are the key messages:

- Tuberculosis is curable
- TB medicines are provided free of cost
- Patient should take medicines regularly for 8 months
- Free of cost TB drugs will be provided at treatment center near to your residence.
- Show him the tablets and explain the number of each tablet to take daily
- Do not get worried if your urine is orange colored
- Must report to treatment center, if any complaint with intake of drugs
- TB bacilli spread through droplet infection when the patient is coughing or sneezing, therefore the patient should cover the mouth at the time of coughing or sneezing.
- Encourage the patient to safely dispose of the coughed out sputum
- TB does not spread through utensils, clothes or sexual relations
- Visit this center at completion of 2/3 months of treatment. Bring sputum for examination. Your progress will be assessed & further treatment will be advised accordingly.

MANAGING HOUSEHOLD CONTACTS

All household contacts (children below 5 years age and symptomatic adults) should be screened and managed according to the NTP case management guidelines. All contacts identified will be entered in box given on back page of TB treatment card TB01.

After interviewing the patient, the DOTS facilitator should take a decision based on the following two points:

1. All children less than 5 years of age should be brought to the diagnostic center for further assessment and management. They can be tested with PPD if available.
2. Adults and children (older than 5 years of age) with symptoms suggestive of tuberculosis i.e. cough > three weeks, weight loss, fever etc. should be asked to visit the diagnostic center at their earliest convenient date.
EXERCISE

Mr Jamil has been diagnosed as a sputum positive, new case of pulmonary TB. Jamil's household members as told by him are as follows:

<table>
<thead>
<tr>
<th>NAME /RELATION</th>
<th>AGE</th>
<th>SYMPTOMS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ms Parveen (wife)</td>
<td>26 years</td>
<td>Coughing badly for almost a month</td>
</tr>
<tr>
<td>Mr Zubair (nephew)</td>
<td>11 years</td>
<td>Headache and stomach aches for 5 days</td>
</tr>
<tr>
<td>Ms Nazia (niece)</td>
<td>8 years</td>
<td>Fever for the last few weeks and weight loss</td>
</tr>
<tr>
<td>Mr Omar (son)</td>
<td>6 years</td>
<td>None</td>
</tr>
</tbody>
</table>

i) Does any of Jamil's household contacts need further management for TB? Y / N
   If yes, who and why?
   _________________________________________________________________

ii) How would you manage the household contacts?
   _________________________________________________________________

iii) Record the chemotherapy of contact, if done, in the remarks section of TB01 below.

   Remarks (side effects, chemotherapy of contacts etc.)
   _________________________________________________________________
SESSION 6 - MANAGING DIRECTLY OBSERVED TREATMENT

SESSION OBJECTIVES

At the end of the session the participants will be able to:

- Explain directly observed treatment to patients and why continued treatment is important
- Help patients to select the best treatment supporter
- Know the seven essential components of treatment support
- Identify and manage side effects of TB drugs

EXPLAINING “DOT” TO THE PATIENT

Directly observed treatment (DOT) is important to ensure daily intake of medicine. It is very important to explain the importance of “direct observation” to the patient and help the patient to identify an acceptable and accessible means of supervising his/her treatment. Direct observation is required for all patients taking Rifampicin.

- Directly Observed treatment is important because TB patients may fail to comply with the treatment due to prolonged duration or forget to take medicine especially when they start feeling well. Treatment supporters are helpful in encouraging patients to take the recommended drug, dose and duration and therefore increase the chance of curing the patient.

- It is important to make sure the patient appreciates the need to identify a person who can support him/her to complete treatment without interruptions.

- Observed treatment is required for intensive phase of Cat 1 and entire duration of treatment in Cat 2 to avoid the risk of drug resistance.

HELPING THE PATIENT TO SELECT A TREATMENT SUPPORTER

According to the WHO, there can be flexibility and innovation in observing treatment, provided that the treatment supporter is accountable to the health services and accessible to the patient. Identification of a suitable and acceptable treatment supporter for the patient is the key to success of directly observed treatment. Using an unacceptable or unsuitable treatment supporter can lead to patient’s default.

Characteristics desirable in selecting a treatment supporter

Characteristics desirable in selecting a treatment supporter are:

- Caring but capable of influencing the patient (C)
- Accessible (A)
- Accountable to health services (A)
- Reliable (R)
Who can be treatment supporter for PP?

The options available for the selection of treatment supporter in order of priority are:

- Health facility based worker i.e. health staff member at the clinic/hospital
- Lady health worker i.e. Women working with National Program for FP & PHC
- Community volunteer living close to patient’s place

Where none of these are possible, other DOT options need to be explored such as using school teachers, NGO workers, or a reliable household member if the patient so demands. The name of the treatment supervisor will also be noted on the patient’s treatment card. Where a patient selects a family member as treatment supporter, that person’s contact details will be noted by the clinic.

Where LHWs, NGOs/CBOs workers or other institutions are involved, the PP should contact the LHW supervisor or the NGO/institution manager and provide them with the patient’s contact details. They will then assign one of their staff or volunteers to support the patient and will inform the PP of the treatment supporter’s name and contact details.

Retrieving default cases

Defaulting patients need follow-up by their treatment supporter and if that does not result in resumption of treatment, help may be sought from an LHW supervisor or staff of the NGO.

In the absence of these the PP will contact the field officer and provide them with the patient’s contact details and they will be followed up by either the field officer or other designated public sector worker.

Request for treatment support:

- The care provider at clinic/hospital will send a written request (preferably by name) to the identified treatment supporter for a meeting
- The patient (preferably) will carry the request to the treatment supporter
- Both the patient and the treatment supporter will attend the requested meeting with the DOTS Facilitator at the clinic/hospital
- The identified Supporter is explained the importance of support to a patient and asked if he/she agrees to take responsibility
- Treatment Supporter should be imparted essential knowledge and skills enabling him/her to carry out the treatment supporter role effectively.
TREATMENT SUPPORT CARD

Patient Name: ____________________________
Father/Husband’s Name: ______________________
Address: ___________________________________
Treatment Center: ___________________________
Treatment Supporter: _________________________
Date Treatment Started: _______________________

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

Drugs taken under direct observation
Drugs self administered
Drugs not taken

How to Directly Observe TB Treatment
1. Greet and welcome the patient. Ask how he or she is and listen to the response while you begin to prepare the medicines.
2. Prepare for Observed Intake:
   ✓ Wash your hands and pour a glass of water for your patient.
   ✓ Open your box of medicines.
   ✓ Check the patient’s name and surname.
   ✓ Take out the patient’s treatment envelope, which contains all his or her medicines.
3. Observe the Intake:
   ✓ Open the packet and pour the tablets directly onto the hand of the patient (avoid touching) and offer him or her a glass of water.
   ✓ The tablets must all be taken one at a time, while you, the TB Treatment Supporter, watch your patient swallows them. If your patient finds it difficult to swallow them one after the others, let him or her take a short breathing space. The medicines must be taken within half an hour to make sure that they work together.
   ✓ Talk to your patient while he or she swallows the tablets. Make sure (s)he swallows the tablets.
4. Record on the Treatment Supporter Card (kept with supporter).

Do’s and Don’ts of Treating Your TB Patient

<table>
<thead>
<tr>
<th>DO</th>
<th>DO NOT</th>
</tr>
</thead>
<tbody>
<tr>
<td>✓ Make sure the medicines are locked away and safe.</td>
<td>✗ Do not store tablets in dump places.</td>
</tr>
<tr>
<td>✓ Keep medicines out of reach of children.</td>
<td>✗ Do not give only part of the daily medicines.</td>
</tr>
<tr>
<td>✓ Know the name, color and strength of each tablet.</td>
<td>✗ Do not replace one patient’s tablets for another’s.</td>
</tr>
<tr>
<td>✓ If the patient cannot swallow the tablets, crush them. The patient may swallow the tablets with water.</td>
<td>✗ Do not not get angry or shout at them - it is not easy being ill.</td>
</tr>
<tr>
<td>✓ Encourage him when they are feeling depressed, or like they are not going to get better,</td>
<td>✗ Do not treat side effects.</td>
</tr>
<tr>
<td>✓ Say that if they take tablets every day for the full 8 months - they will get completely well.</td>
<td></td>
</tr>
<tr>
<td>✓ Refer all complications and side effects to the health worker.</td>
<td></td>
</tr>
</tbody>
</table>

SEVEN ESSENTIAL COMPONENTS OF TREATMENT SUPPORT

1. Collect tablets, on monthly basis, and safely store
   Treatment supporter should collect the drugs from the clinic/ hospital on a monthly basis (but patient will accompany the supporter). The drugs must be stored in a safe place (under lock, if possible) and out of reach of children. In addition, the storage place should be dry and cool. During continuation phase patient is responsible for collecting drugs from the treatment center on monthly basis.

2. Directly observe intake of tablets (in right number of drugs and dosage)
   (READ “HOW TO OBSERVE TB TREATMENT” ON BACK OF THE TREATMENT SUPPORT CARD)
National Tuberculosis Control Programme

It is important for the Treatment Supporter to understand clearly the number of different tablets to be taken by the patient, on daily basis. To facilitate this, a small packet containing “tablets for a day” can be given to the Supporter so that he/she can use this for comparison purposes.

3. **Record daily intake of drugs in Treatment Support Card.** The Treatment Support Card will be kept with the Treatment Supporter, who will keep record of the patient’s daily intake of tablets. Three symbols used to record “supervised intake”, “unsupervised intake” and “missed intake” of tablets are same as used in TB01 records.

4. **Remind patient to visit diagnostic center at the completion of intensive phase**
   Treatment supporter will ensure that patient under his/her supervision must visit the clinic/ hospital at the completion of 2nd (or 3rd if re-treatment CAT II) month of treatment. During these follow-up visits sputum smears are done and patients are assessed clinically.

5. **Identify possible side effects and refer**
   Treatment supporter will keep a vigilant eye on patient and in case he recognize a side effect, the patient will be referred to clinic/ hospital for management.

6. **Discuss difficulties in continued treatment and help resolve them**
   In case patient experiences some difficulties to come to treatment supporter for observed treatment, the supporter will hold interviews with family members of the patient and will resolve the issues to the best satisfaction of patient and family members of the patient.

7. **Trace and help to retrieve late patients**
   In case patient fails to report for observed treatment, supporter will use all available methods to trace the patient including visit of the home of the patient, convince family members of the patient and even seek help of public representatives to bring back the patient on treatment.

The Treatment Supporter is oriented to carry out these essential tasks.
IDENTIFYING AND MANAGING SIDE EFFECTS

Screening for side effects of anti-tuberculosis drugs is an essential part of follow-up by the treatment supporter and at the hospital/clinic. This is mostly done by interviewing patients and/or Treatment Supporters when they visit the hospital/clinic.

- **Ask** if patient has any complaint indicating side effect, if yes, **Examine** and **Advise/Manage the patient according to the following guidelines:**

<table>
<thead>
<tr>
<th>If patient has a side effect:</th>
<th>Then Manage as follows:</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Minor Side Effects</strong></td>
<td></td>
</tr>
<tr>
<td>✓ Anorexia, nausea, abdominal pain</td>
<td>Continue anti-TB drugs and:</td>
</tr>
<tr>
<td>✓ Joint pains</td>
<td>Give drugs last thing at night</td>
</tr>
<tr>
<td>✓ Burning sensation in the feet</td>
<td>Aspirin</td>
</tr>
<tr>
<td>✓ Itching of skin</td>
<td>Pyridoxine 100 mg daily</td>
</tr>
<tr>
<td></td>
<td>Anti histamine</td>
</tr>
<tr>
<td></td>
<td>If no response refer</td>
</tr>
<tr>
<td><strong>Major Side Effects</strong></td>
<td>Stop anti-TB drugs. Refer to a Specialist</td>
</tr>
<tr>
<td>✓ Skin rash</td>
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<tr>
<td>✓ Deafness</td>
<td></td>
</tr>
<tr>
<td>✓ Dizziness (vertigo &amp; nystagmus)</td>
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</tr>
<tr>
<td>✓ Jaundice*</td>
<td></td>
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<tr>
<td>✓ Visual impairment (other causes excluded)</td>
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<tr>
<td>✓ Shock, purpura, acute renal failure</td>
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</tbody>
</table>

*If the patient passes orange/red colour urine then reassure the patient that this is normal for the drug*

- **At completion of intensive phase, also append Rx. Support Card to TB01.**
SESSION 7 - FOLLOW-UP IN CLINIC/ HOSPITAL DURING TREATMENT

SESSION OBJECTIVES

At the end of this session, the participants will be able to:

- Decide when and why to do smears during the follow-up
- Decide when to change the treatment (drugs) during follow-up.
- Decide what to prescribe during continuation phase
- Record relevant data in the TB01 card, TB02 card and TB03 register

FOLLOW UP IN CLINIC/ HOSPITAL

Every registered sputum positive TB patient must visit the clinic/ hospital at the completion of 2\textsuperscript{nd} (or 3\textsuperscript{rd} if re-treatment CAT II), 5\textsuperscript{th} and 7\textsuperscript{th} month of treatment. During these follow-up visits sputum smears are done and patients are assessed clinically.

The three main treatment decisions, which need consideration during the follow-up, are:

- When to do sputum smear examination during routine follow-up
- When to change TB drugs (in routine and in special circumstances)
- Prescription during continuation phase

The decisions for treatment during follow-up are based primarily on sputum smear results, supplemented by clinical assessment (especially for sputum smear negative patients). Weight of patient is taken as an indirect indicator of the patient’s health. Gradual weight gain is considered to be an indication of improvement.

It is important that on each monthly visit to treatment center, the regularity of drug intake is ascertained. Generally, the following three methods are used to ascertain the regularity of drug intake:

- Review of the Treatment Support Card
- Interview of the patient
- Count of the empty blisters (if blister packs are used in the programme)

SPUTUM SMEAR EXAMINATION DURING FOLLOW-UP

- Sputum smear examination is the key follow-up examination, and treatment decisions are based on sputum smear results of the patient. At least one sputum sample, preferably morning sample should be examined on each follow-up visit. The sputum smear examination schedule differs slightly according to category of the TB patient.
Broadly speaking, completion of treatment months refers to the number of doses taken (e.g. 60 or 90 doses of TB drugs during intensive phase), rather than calendar month (in its strict sense). This means patient is generally sent for the first follow-up sputum examination on his/her completing 60 (Cat-I) or 90 (CAT-II) doses of TB drugs.

The examination of sputum smears at the completion of the intensive phase of treatment is the best indicator that the drugs prescribed have been taken regularly and that they are effective.

More than 80% of new pulmonary smear-positive cases should be smear negative after the initial 2 months of treatment. In addition, 75% of re-treatment cases should also be sputum negative after 3 months of treatment. It is for this reason that sputum smears are done at the end of month 2 for Cat I patients and at the end of month 3 for Cat II patients.

Sputum smear negative pulmonary cases must also have their sputum examined after 2 months of treatment in order to make sure that they have not become smear positive or that they were not falsely registered as sputum negative cases.

All TB cases found to be sputum smear-positive at the start of treatment should also have their sputum examined at the end of month 5 (Category I and II). The sputum examination at the end of the 5th month is to identify TB patients who are not responding to the prescribed drugs, either due to ineffective regimen and/or irregular intake of drugs.

All TB cases found to be sputum smear-positive at the start of treatment should also have their sputum examined at the end of month 7 (category I and II). The sputum examination at the end of 7th month is important to determine the outcome of treatment i.e. whether the patient is cured or not.

### CHANGING THE TREATMENT DURING FOLLOW-UP

**A.** The main treatment decision in light of periodic assessment is when to end intensive phase (four or more drugs) and start continuation phase (with two or more drugs). The decision is made by combining the smear results at the end of 2/3 months with the information recorded at the time of registration.

1. **Cat I: Smear positive case**
   - If converted into sputum negative at the end of 2nd month of treatment, then start continuation phase.
National Tuberculosis Control Programme

- If remain sputum positive at end of 2\textsuperscript{nd} month of treatment, then continue intensive phase treatment for 1 more month. Re-examine sputum at the end of 3 months and start continuation phase treatment irrespective of smear results.

2. Cat 1: Smear negative case

- If found sputum negative at end of 2\textsuperscript{nd} month of treatment, then start continuation phase.
- If found sputum positive at end of 2\textsuperscript{nd} month of treatment, then repeat sputum smear to confirm positive and if confirmed, then register at category II

3. CAT II (Re-treatment case):

- If converted into sputum negative at end of 3\textsuperscript{rd} month of treatment, then start continuation phase.
- If remains sputum positive at end of 3\textsuperscript{rd} month of treatment, then continue intensive phase treatment for 1 more month. Re-examine sputum at end of 4\textsuperscript{th} month. If the sputum is found negative, then start continuation phase. If the sputum is still positive, then stop drugs for 7 days, refer to laboratory for culture/sensitivity (if feasible) and start continuation phase.

B. The treatment may need change (or even stop) at any point in time if signs/symptoms of major side effect(s) of one or more TB drugs appear. Changes in the treatment on appearance of side effects have already been discussed above.

C. Another situation where patient needs change of treatment is when he/she fails to respond to TB drugs and is declared a “failure”. Declare and manage a TB patient who fails to respond to TB drugs during continuation phase as under;

1. Smear positive case (CAT I): If a smear positive case (Cat I), found sputum positive at end of 5\textsuperscript{th} month of treatment, then repeat sputum smear to confirm positive. If confirmed, then declare failure and register as Cat II patient and send for culture and sensitivity, if possible.
2. Re-treatment case (CAT II): If a re-treatment case (Cat II), remain sputum positive at end of 7\textsuperscript{th} month of treatment, then repeat sputum smear to confirm positive. If confirmed, then declare failure and complete treatment for eight months OR refer to tertiary level hospital for further management.

**PRESCRIPTION FOR CONTINUATION PHASE**

Two drugs (i.e. Isoniazid plus Ethambutal) are given to category-I patients, for six months of the continuation phase. For category-II patients, three drugs (i.e. Isoniazid, Ethambutal and Rifampicin) are given for five months of the continuation phase.
The dosage of each drug prescribed during the continuation phase remains the same as initially prescribed on the basis of pre-treatment weight of the patient. Category-I patients need frequent monitoring, but not observed treatment, during the continuation phase. However, in the case of category-II patients it is recommended that their treatment should be observed during the continuation phase because of continued Rifampicin intake throughout.

The tables given in the Session 4 helps the doctors to prescribe standardized drug regimen, in accordance with national guidelines, during the continuation phase of treatment.

If a patient is still sputum smear positive at the end of the intensive phase of treatment (2 or 3 months) and hence has an extra month of intensive phase of treatment, the patients should take continuation phase treatment for the duration to complete eight months of his/her treatment. In other words, they will have one month less of the continuation phase.

**RECORDING INFORMATION**

The sputum results are recorded in the TB01 card; TB02 card and TB03 register (by copying data from the laboratory report into an appropriate box in each of these cards). The date for next sputum examination, at diagnostic center, is also recorded in TB02.

The drugs prescribed at the start of continuation phase are recorded in the TB01 and TB02 cards. The number of tablets is recorded in the boxes for each drug, as already practiced in the session-4. In case intensive phase is extended for an extra month or Streptomycin is stopped at completion of 2 months, information note is recorded in the remark section of TB02. The drug delivery for the continuation phase is recorded on the TB01 and TB02 cards.

The treatment outcome, if declared, is also recorded in the TB01 card, TB02 card and TB03 register, by writing the “date treatment stopped” in the appropriate box for the outcome.

**Table: Management of TB during follow up**

<table>
<thead>
<tr>
<th>Category of Patient (Smear positive)</th>
<th>Sputum result</th>
<th>Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Category I</td>
<td>Negative at end of 2 months</td>
<td>Start continuation phase treatment</td>
</tr>
<tr>
<td>Category I</td>
<td>Positive at the end of 2 months</td>
<td>Continue intensive phase treatment for 1 more month. Re-examine sputum at end of 3 months and continue phase irrespective of smear result</td>
</tr>
<tr>
<td>Category I</td>
<td>Positive at the end of 5 months</td>
<td>Repeat sputum smear to confirm the positive status</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Declare failure, if smear-positive confirmed</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Register as Cat-II patient</td>
</tr>
<tr>
<td>Category I</td>
<td>Negative at the end of 5 months</td>
<td>Continue treatment</td>
</tr>
</tbody>
</table>
### National Tuberculosis Control Programme

| Positive at end of 7 months | Repeat sputum smear to confirm positive status  
| Declare failure, if smear-positive confirmed  
| Register as Cat-II patient |
| Negative at end of 7 months | Continue treatment |

**Category I**  
(smear negative)

| Negative at end of 2 months | Start continuation phase treatment |
| Positive at end of 2 months | Repeat sputum smear to confirm positive status  
| If positive, register as category-II |

**Category II**

| Negative at end of 3 months | Start continuation phase treatment |
| Positive at end of 3 months | Continue intensive phase treatment for 1 month  
| Re-examine sputum at end of 4 months  
| If negative, start continuation phase  
| If positive, stop drugs for 7 days, refer to laboratory for  
| Culture/sensitivity & start continuation phase |

| Positive or Negative at end of 5 months | Continue treatment |
| Negative at end of month 07 | Continue treatment |
| Positive at end of 7 months | Declare treatment failure & refer to tertiary level Hospital for management |

### EXERCISES:

**Exercise 1:**

Mr. Haroon is a registered smear-positive case of TB (Cat-II). On completion of 3rd month of treatment; he visits BMU for follow-up examinations (on 20th October 2006). His follow-up sputum result is found Negative (lab serial # 1002)

i) Would you start continuation regimen for Mr. Haroon  
Y/N

ii) If yes prescribe & record continuation phase drugs in TB01 below  
(Mr. Haroon weighed 45 Kg, BMU has 3-FDC RHE (150/75/275) tablets available in the store)
### II. CONTINUATION PHASE

#### Number of tablets per dose

<table>
<thead>
<tr>
<th>Day</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
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<th>18</th>
<th>19</th>
<th>20</th>
<th>21</th>
<th>22</th>
<th>23</th>
<th>24</th>
<th>25</th>
<th>26</th>
<th>27</th>
<th>28</th>
<th>29</th>
<th>30</th>
<th>31</th>
</tr>
</thead>
<tbody>
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</tr>
</tbody>
</table>

Daily supply: enter ✓. Periodic supply, enter X on (day) when drugs are collected and draw a horizontal line through the number of days supplied; O = drugs not taken.

#### (Household) CONTACTS

<table>
<thead>
<tr>
<th>Name of contact</th>
<th>Age</th>
<th>Sex</th>
<th>Method of Screening</th>
<th>Date &amp; Result of screening</th>
<th>Remarks</th>
<th>Treatment outcome</th>
<th>Date of decision</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

iii) PI record the sputum smear results and change in the prescriptions and next date for follow-up assessment at BMU for Mr Haroon in TB02 below.
(Only relevant columns of TB 02 are filled for exercise purpose)
National Tuberculosis Control Programme

**Tuberculosis Identity Card**

- **Name**: Haroon
- **Patient Registration No.**: __________
- **Address**: ________________ **Date of registration**: __________
- **Sex**: □ M □ F **Age**: ______ **Date treatment start**: ______

**Name of Diagnostic Center**: ________________

**Name of Treatment Center**: __________________

**Date of Appointment for drugs Collection**

<table>
<thead>
<tr>
<th>Current</th>
<th>Next</th>
<th>Current</th>
<th>Next</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Appointment for follow-up sputum examination**

<table>
<thead>
<tr>
<th>Date</th>
<th>Place of examination</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Sputum smears microscopy**

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Lab No.</th>
<th>Result</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>19/07/06</td>
<td>820</td>
<td>2+</td>
<td>45Kg</td>
</tr>
</tbody>
</table>

**Type of patient**

- Pulmonary
- Extrapulmonary, specify ________

**Type of patient**

- New
- Treatment after default
- Relapse
- Treatment after failure
- Transfer in
- Other specify ________

**Disease site**

- Pulmonary
- Extrapulmonary, specify ________

**Treatment Outcome**

**Date treatment Stopped**

**Exercise-2**

Mrs. Nasreen is a registered new smear-positive case of pulmonary TB (Cat-1). On completion of 2nd month of treatment, she visits the BMU (On 25th November 2006) for follow-up assessment. Her smear results are found 1+ (lab serial # 1070)

i) Would you start continuation phase regimen for Mrs. Nasreen?  Y/N

ii) if no, what would you do?

-------------------------------------------------------------------

iii) Please record the sputum smear results and the next date for follow-up assessment at BMU in TB02 below (Only relevant columns of TB 02 are filled for exercise purpose)
**Tuberculosis Identity Card**

<table>
<thead>
<tr>
<th>Name</th>
<th>Nasreen</th>
</tr>
</thead>
<tbody>
<tr>
<td>Patient Registration No.:</td>
<td>________</td>
</tr>
</tbody>
</table>

| Address | Date of registration: | Sex | M | F | Age | Date treatment start | |
|---------|-----------------------|-----|---|---|-----|----------------------|

| Name of Diagnostic Center | |
|---------------------------| |

| Name of Treatment Center | |
|--------------------------| |

<table>
<thead>
<tr>
<th>Sputum smear microscopy</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Month</td>
<td>Date</td>
</tr>
<tr>
<td>0</td>
<td>25/09/06</td>
</tr>
</tbody>
</table>

| Disease site (tick one) | |
|-------------------------| |
| Pulmonary | |
| Extrapulmonary, specify | |

| Type of patient (tick one) | |
|---------------------------| |
| New | Treatment after default |
| Relapse | Treatment after failure |
| Transfer in | Other specify | |

**I. INITIAL PHASE**

| CAT (I, II) | Drugs and dosage: | |
|-------------|-------------------| |
| I | (RHZE) | |
| 3 | | |

**II. CONTINUATION PHASE**

| Drugs and Dosage: | |
|-------------------| |
| Adult | Child |
| (EH) | (RHE) | RH |

| Date of Appointment for drugs Collection | |
|-----------------------------------------| |
| Current | Next | Current | Next | |

| Appointment for follow – up sputum examination | |
|-----------------------------------------------| |
| Date | Place of examination |
| 25-09-2006 | Shifa Medical Center |

| Treatment Outcome | Date treatment Stopped | |
|--------------------|------------------------|

**REMEMBER**

**Important Instructions for the patient**

1. This is an important card, keep it with care.
2. Bring this card when you come to see doctor, collect drugs or get sputum examined.
3. TB is a curable disease.
5. Regular intake of drugs is essential for the health facility nearest to your place.
6. Get TB drugs, free of cost, for the health facility nearest to your place.
7. Must visit the health facility on due (date of appointment).
8. If you cooperate, you will get cured (Insha- Allah).
SESSION 8 - MANAGING TB PATIENTS WITH INTERRUPTED TREATMENT

SESSION OBJECTIVES

At the end of this session, the participants will be able to:

- Retrieve and review the records of previous treatment category, the length of treatment before interruption, and the length of interruption (from the TB01 and TB02 cards)
- Decide about sputum smear examination, patient re-registration and treatment according to NTP protocols.

DECIDING ON HOW TO MANAGE THE PATIENT

The doctor makes decisions on how to manage patient with interrupted treatment based on following information:

- Category in which patient was registered before interrupting treatment
- Length of treatment before interruption
- Length of interruption
- Smear results after interruption.
- Condition of the patient

Record of previous treatment

Management of patients after treatment interruption is based on review of information about treatment before interruption and current smear results of the patient. Records of the previous treatment (before interruption) are important to know:

The patient’s previous category:
This data is clearly indicated on both the TB01 and TB02 cards and there is no difficulty in getting this information. The patient’s category before interruption of treatment will affect the treatment prescribed after interruption of treatment.

Length of treatment before interruption:
This is estimated by comparing the date when the patient started previous treatment with the last date due for his/her collecting the pills from the treatment center. Both these dates can be found on the TB01 and TB02 cards.

Length of interruption:
This is estimated by comparing the last date due for patient’s collecting the pills from treatment center with the current date of the visit. The last date due for collection of tablets at the treatment center can be found on the TB01 and TB02 cards.

The doctor makes the decisions, on how to manage patient with interrupted treatment, by combining information about the category in which patient was registered before interrupting treatment, the length of treatment before interruption, length of interruption and smear results after interruption. The tables on page ------ help the doctor to make these decisions, according to NTP Guidelines.
DECIDING ON HOW TO MANAGE THE PATIENT

The management of patients after interruption is decided by combining information about treatment before interruption and the current condition of the patient.

The following tables helps the doctors to manage patients who were registered as new and/or re-treatment cases before interrupting treatment and were put on anti-TB treatment, in accordance with national guidelines. The tables are easy to use and they are briefly described below:

- Select the appropriate table according to the category of the patient before treatment was interrupted.
- Select which row of the table to use, depending on the length of treatment the patient received before interruption (i.e. less than or more than one month).
- Then by using the length of the period, for which treatment was interrupted select the appropriate smaller row. decide whether sputum smear examination is required or not,” If sputum smear examination is required:
  - send the patient for examination and ask him/her to return with smear results
  - When the patient returns, read the smear results and decide accordingly about re-registration and treatment of the patient. This is done by moving across the row to the columns “register again as” and “treatment”. If sputum smear is not required, move across the row to the last column “Treatment” and prescribe accordingly.

### Treatment of New Cases Who Interrupted Treatment

<table>
<thead>
<tr>
<th>Length of treatment before interruption</th>
<th>Length of interruption</th>
<th>Do a smear?</th>
<th>Result of smear</th>
<th>Register again as</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 month</td>
<td>&lt; 2 weeks</td>
<td>No</td>
<td>-</td>
<td>-</td>
<td>Continue on same category I*</td>
</tr>
<tr>
<td></td>
<td>2-8 weeks</td>
<td>No</td>
<td>-</td>
<td>-</td>
<td>Start again on same category I**</td>
</tr>
<tr>
<td></td>
<td>&gt; 8 weeks</td>
<td>Yes</td>
<td>positive</td>
<td>treatment after default</td>
<td>Start on category II</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>negative</td>
<td>Other</td>
<td>Start same category I</td>
</tr>
<tr>
<td>1 - 2 months</td>
<td>&lt; 2 weeks</td>
<td>No</td>
<td>-</td>
<td>-</td>
<td>Continue category I</td>
</tr>
<tr>
<td></td>
<td>2-8 weeks</td>
<td>Yes</td>
<td>Positive</td>
<td>-</td>
<td>One extra month of Intensive phase</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Negative</td>
<td>-</td>
<td>Continue on category I</td>
</tr>
<tr>
<td></td>
<td>&gt; 8 weeks</td>
<td>Yes</td>
<td>Positive</td>
<td>treatment after default</td>
<td>Start on category II</td>
</tr>
</tbody>
</table>
## Treatment for Relapse and Failure Cases Who Interrupted Treatment

<table>
<thead>
<tr>
<th>Length of treatment before interruption</th>
<th>Length of interruption</th>
<th>Do a smear?</th>
<th>Result of smear</th>
<th>Register again as</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 1 month</td>
<td>&lt; 2 weeks</td>
<td>no</td>
<td>-</td>
<td>-</td>
<td>Continue Cat II*</td>
</tr>
<tr>
<td></td>
<td>2-8 weeks</td>
<td>no</td>
<td>-</td>
<td>-</td>
<td>Start again on CAT II</td>
</tr>
<tr>
<td></td>
<td>&gt; 8 weeks</td>
<td>yes</td>
<td>positive</td>
<td>treatment after default</td>
<td>Start again on CAT II</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>negative</td>
<td>others</td>
<td>continue CAT II</td>
</tr>
<tr>
<td>1-2 months</td>
<td>&lt; 2 weeks</td>
<td>No</td>
<td>-</td>
<td>-</td>
<td>continue CAT II</td>
</tr>
<tr>
<td></td>
<td>2-8 weeks</td>
<td>yes</td>
<td>positive</td>
<td>-</td>
<td>One extra month of intensive phase of CAT II</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>negative</td>
<td>-</td>
<td>continue CAT II</td>
</tr>
<tr>
<td></td>
<td>&gt; 8 weeks</td>
<td>yes</td>
<td>positive</td>
<td>treatment after default</td>
<td>start again on CAT II</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>negative</td>
<td>others</td>
<td>continue CAT II</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>&gt; 2 months</td>
<td>&lt; 2 weeks</td>
<td>No</td>
<td>-</td>
<td>-</td>
<td>continue CAT II</td>
</tr>
<tr>
<td></td>
<td>2-8 weeks</td>
<td>yes</td>
<td>positive</td>
<td>-</td>
<td>start again on CAT II</td>
</tr>
</tbody>
</table>

* A patient must complete all 60 doses of the initial intensive phase. For example, if a patient has to continue his previous treatment and he took one month of treatment (30 doses) before interrupting, he will have one more month (30 doses) of the intensive phase to take. He will then start the continuation phase of treatment.

** A patient who must “start again” will restart from the beginning.
### National Tuberculosis Control Programme

<table>
<thead>
<tr>
<th></th>
<th>negative</th>
<th>positive</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; 8 weeks</td>
<td>yes</td>
<td>treatment after default</td>
<td>continue CAT II</td>
</tr>
<tr>
<td></td>
<td></td>
<td>start again on CAT II</td>
<td></td>
</tr>
</tbody>
</table>

- A patient must complete all 90 doses of the initial intensive phase

### EXERCISES

#### Exercise 1

Today is December 20, 2006; Mr. Arshad is a registered TB patient, who has come to his treatment center after interruption. Look to his treatment card available at treatment center and answer.

#### Patient Registration

- **Name of Diagnostic Centre (BMU):** RHC Gharo
- **Patient’s Name:** Arshad
- **Father’s/ Husband Name:** Alluadin
- **Sex:** M □ F □  **Age:** 25 y  **Date of registration:** 26-10-2006
- **Name/ address of patient Contact Person:**
- **Name of Treatment Center:**
- **Address:**
- **Name / Type of treatment supporter with Phone No.:** Ms. Phool (5354785)

#### I. INITIAL PHASE - prescribed regimen and dosages

**Referral by:**
- Self-referral
- Community member
- Public facility
- Private facility/provider
- LHW
- Others

**CAT (I, II):**

- **Number of tablets (per dose) and dosage of S:**
  - RHZE (150/75/400/275)
  - RHZ (60/30/150)
  - RH (60/30)

**Tick appropriate box after the drugs have been administered**

- **Sputum smear microscopy**
- **Weight (kg):**
- **CXR:**

#### Patient Treatment Card

- **Patient Registration No.:**
- **Disease site (tick one):**
  - Pulmonary
  - Extra pulmonary, specify
- **Confirmatory evidence:**
  - Y/N
- **Type of patient (check one):**
  - New
  - Treatment after default
  - Relapse
  - Treatment after failure
  - Transfer in
  - Other, specify

#### Sputum smear microscopy

- **Month:**
- **Date:**
- **Lab No.:**
- **Result:**

#### Weight (kg)

- **CXR:**

#### Periodic supply: enter X on day when drugs are collected and draw a horizontal line ( ) through the number of days supplied.

#### Daily supply: enter .

- **O = drugs not taken**

#### a. In which category was Mr. Arshad registered

#### b. What was length of his treatment before interruption
c. What was length of interruption

d. Does Mr Arshad needs referral to BMU

e. If yes, how would you manage Mr. Arshad at the BMU

Exercise 2

Today is February 20, 2007, Ms. Yasmeen is a registered TB patient, who has come to his treatment center after interruption. Look to his treatment card available at treatment center and answer

<table>
<thead>
<tr>
<th>Tuberculosis Treatment Card</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name of Diagnostic Centre (BMU):</strong> Rasheed Medical Complex</td>
</tr>
<tr>
<td><strong>Patient's Name:</strong> Yasmeen</td>
</tr>
<tr>
<td><strong>Father's/ Husband Muhammad Bilal</strong></td>
</tr>
<tr>
<td><strong>Sex:</strong> M [ ] F [ ] <strong>Age:</strong> 22 y <strong>Date of registration:</strong> 2-10-2006</td>
</tr>
</tbody>
</table>

**I. INITIAL PHASE** - prescribed regimen and dosages

**CAT (I, II):** II

**Number of tablets (per dose) and dosage of S:**

<table>
<thead>
<tr>
<th>RHZE (150/75/300/275)</th>
<th>5</th>
<th>750</th>
</tr>
</thead>
<tbody>
<tr>
<td>RZ (60/30)</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>RH (60/30)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Tick appropriate box after the drugs have been administered**

| 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 |
|-------|-----|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| Oct   |     | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Nov   |     | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |
| Dec   |     | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X | X |

**Referral by:**

- Self-referral
- Community member
- Public facility
- Private facility/provider
- LHW
- Others

**Disease site** (tick one)

- Pulmonary
- Extra pulmonary, specify ___________

**Confirmatory evidence** Y/N

If Yes (tick) Histopathology/Bacteriology

**Type of patient** (check one)

- New
- Treatment after default
- Relapse
- Treatment after failure
- Transfer in
- Other, specify ___________

**Sputum smear microscopy**

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Lab No</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-10-06</td>
<td>1650</td>
<td>2+</td>
<td>56Kg</td>
</tr>
</tbody>
</table>

**Weight (kg)**

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Lab No</th>
<th>Result</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-10-06</td>
<td>1650</td>
<td>2+</td>
<td>56Kg</td>
</tr>
</tbody>
</table>

**Tick appropriate box after the drugs have been administered**

- Daily supply: enter X
- Periodic supply: enter X on day when drugs are collected and draw a horizontal line through the number of days supplied.
- O = drugs not taken

**a. In which category was Ms. Yasmin registered**

**b. What was length of her treatment before interruption**

**c. What was length of interruption**

**d. Does Ms. Yasmeen needs referral to BMU**

**e. If yes, how would you manage Ms. Yasmeen at the BMU**
Exercise 3

To day is March 10, 2007 Ms. Sabiha, registered at RHC Gharo has come to BHU Dhabeji, her treatment center after interruption. Look at her TB02 card shown below (Partially filled for purpose of exercise) and answer

**Tuberculosis Identity Card**

<table>
<thead>
<tr>
<th>Name</th>
<th>Patient Registration No.:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>Date of registration:</td>
</tr>
<tr>
<td>Sex: [M] [F]</td>
<td>Age:</td>
</tr>
<tr>
<td>Name of Diagnostic Center</td>
<td>Date treatment start:</td>
</tr>
<tr>
<td>Name of Treatment Center</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Lab No.</th>
<th>Result</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>2-11-2006</td>
<td>1090</td>
<td>2+</td>
<td>47Kg</td>
</tr>
</tbody>
</table>

**Type of patient (tick one)**

- [ ] New
- [ ] Relapse
- [ ] Treatment after default
- [ ] Treatment after failure
- [ ] Transfer in
- [ ] Other specify

**Disease site (tick one)**

- [ ] Pulmonary
- [ ] Extrapulmonary, specify

**I. INITIAL PHASE**

<table>
<thead>
<tr>
<th>CAT (I, II)</th>
<th>Adult</th>
<th>Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drugs and dosage:</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(HRZE)</td>
<td>3</td>
<td>S</td>
</tr>
</tbody>
</table>

**II. CONTINUATION PHASE**

<table>
<thead>
<tr>
<th>Drugs and Dosage:</th>
<th>Adult</th>
<th>Child</th>
</tr>
</thead>
<tbody>
<tr>
<td>(EH)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>(RHE)</td>
<td></td>
<td>RH</td>
</tr>
</tbody>
</table>

**Date of Appointment for drugs Collection**

<table>
<thead>
<tr>
<th>Current</th>
<th>Next</th>
<th>Next</th>
</tr>
</thead>
<tbody>
<tr>
<td>3-11-2006</td>
<td>3-12-2006</td>
<td>3-01-2007</td>
</tr>
<tr>
<td>5-12-2006</td>
<td>5-01-2007</td>
<td>5-11-2007</td>
</tr>
</tbody>
</table>

**Appointment for follow up sputum examination**

<table>
<thead>
<tr>
<th>Date</th>
<th>Place of examination</th>
</tr>
</thead>
<tbody>
<tr>
<td>03-01-2007</td>
<td>Shifa Medical Center</td>
</tr>
</tbody>
</table>

**Treatment Outcome**

<table>
<thead>
<tr>
<th>Date treatment Stopped</th>
</tr>
</thead>
<tbody>
<tr>
<td>03-01-2007</td>
</tr>
</tbody>
</table>

**REMEMBER**

**Important instructions for the patient**

1. This is an important card, keep it with care.
2. Bring this card when you come to see doctor, collect drugs or get sputum examined.
3. TB is a curable disease.
5. Regular intake of drugs is essential for the health facility nearest to your place.
6. Get TB drugs, free of cost, for the health facility nearest to your place.
7. Must visit the health facility on due (date of appointment).
8. If you cooperate, you will get cured (Insha-Allah).

---

a. In which category was Ms. Sabiha registered?

b. What was length of her treatment before interruption?

c. What was length of interruption?

d. Does Ms. Sabiha needs referral to BMU?

e. If yes, how would you manage Ms. Sabiha at the BMU?
SESSION 9: Declaring Treatment Outcome

SESSION OBJECTIVES

At the end of this session, the participants will be able to:

- Review the relevant data on the TB01 card, and declare treatment outcome accordingly
- Record treatment outcomes in the TB01, TB02 cards and TB03 register

DECLARING TREATMENT OUTCOME

The National TB Control Program has a set of nationally agreed nomenclature and definitions for various treatment outcomes (results) of the TB patients. The definitions used in the program are compatible with international suggestions. The treatment outcomes are:

**Cured:** Initially sputum smear positive patient who has completed the treatment (eight months) and is smear negative in the last month of treatment and on at least one previous occasion

**Treatment Completed:** Initially sputum smear positive patient who completed the treatment (eight months) and had negative smears at the end of intensive phase, but with no sputum examination at the end of treatment

OR

Smear negative patient who received a full course of treatment (eight months

**Treatment Failure:** Smear positive patient who remained, or became again smear positive five months or later after commencing treatment.

OR

Smear negative patient found smear positive at the end of 2nd month of treatment

**Defaulted:** A patient who at any time after registration had not collected drugs for consecutive two months or more

**Transferred Out:** A patient transferred from one TB Register to another TB Register

**Died:** Patient who is reported to have died of any reason during the course of treatment (based on information gathered and recorded by a responsible health worker)
## IF THE PATIENT:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Treatment Outcome</th>
</tr>
</thead>
<tbody>
<tr>
<td>Registered as sputum smear positive (category I or II)</td>
<td>Cured</td>
</tr>
<tr>
<td>Completed 8 months treatment</td>
<td></td>
</tr>
<tr>
<td>Had negative smear on 2 occasions during follow up, one of which is at month 7.</td>
<td></td>
</tr>
<tr>
<td>Registered as sputum smear positive</td>
<td>Treatment Completed</td>
</tr>
<tr>
<td>Had a negative smear result at the end of the intensive phase but no smear result at end of treatment.</td>
<td></td>
</tr>
<tr>
<td>Completed 8 months treatment</td>
<td></td>
</tr>
<tr>
<td>Registered as sputum smear negative or extra-pulmonary</td>
<td></td>
</tr>
<tr>
<td>Collected all his drugs</td>
<td></td>
</tr>
<tr>
<td>Known to have died from any cause during the treatment period</td>
<td>Died</td>
</tr>
<tr>
<td>Registered as smear positive category-I, and</td>
<td></td>
</tr>
<tr>
<td>Found to be smear positive at month 5 or later</td>
<td></td>
</tr>
<tr>
<td>Registered as sputum smear negative</td>
<td>Treatment Failure</td>
</tr>
<tr>
<td>Found to be smear-positive at the end of month 2</td>
<td></td>
</tr>
<tr>
<td>Registered as sputum smear-positive category-II and found to be smear-positive at end of month 7</td>
<td></td>
</tr>
<tr>
<td>Registered as TB patient (category-I, or II, )</td>
<td>Defaulted</td>
</tr>
<tr>
<td>Not collected drugs for more than 2 consecutive months</td>
<td></td>
</tr>
<tr>
<td>Transferred to another TB Register</td>
<td>Transferred Out</td>
</tr>
</tbody>
</table>

## RECORDING THE TREATMENT OUTCOME

- The treatment outcome is recorded in the TB Treatment Card (TB01), TB Patient Card (TB02) and TB Register (TB03). The treatment outcome is recorded by writing "Date Treatment Stopped" in the appropriate box in these cards/forms.
- The date treatment stopped is the last date the patient is expected to have taken the drugs.
- In case of defaulter, “the date treatment stopped” will be the last date due for the patient’s collecting his/her drugs and will be recorded after waiting two months.
- In case of died the reported date of patient’s death is recorded as date stopped treatment.
- In case of treatment failure, the date of doctor’s examining the smear-results and declaring patient a failure is recorded as date treatment stopped (re-registration number is recorded in remarks column of TB03).
National Tuberculosis Control Programme

In case of transferred out, actual date of patient transferred to another health facility is recorded as date treatment stopped (name of the clinic to which patient and his records are transferred is written in remarks column of TB03).

EXERCISES

Exercise 1:

You are a doctor incharge of BMU at your clinic. Review the following TB01 of Mr. Jamil and answer

![Tuberculosis Treatment Card](image-url)

**National Tuberculosis Control Programme**

**TB01**

**Name of Diagnostic Centre (BMU):** Sehat Clinic Thatta

**Patient’s Name:** Jamil Ahmad

**Father’s/ Husband Name:** Nazir Ahmad

**Sex:** M  F  Age: 28 years  Date of registration: 3-07-2006

**Name of Treatment Center:** Sehat Clinic Thatta

**Contact Person with Phone no.:**

**Name / Type of treatment supporter with Phone No.:** Abdullah (Dispenser) 534294

**I. INITIAL PHASE** - prescribed regimen and dosages

**Referral by:**

- Self-referral
- Community member
- Public facility
- Private facility/provider
- LHW
- Others

**CAT (I, II):** 1

**Number of tablets (per dose) and dosage of S:**

**ADULT**

| Month | 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 |
|-------|---|---|---|---|---|---|---|---|---|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|----|
| **RHZE** |   |   |   |   |   |   |   |   |   |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |    |
| **(150/75/400/275)** |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| **S** |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| **RHZ** |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| **(60/30/150)** |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| **R** |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| **(60/30)** |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| **S** |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**Tick appropriate box after the drugs have been administered**

- Daily supply: enter X
- Periodic supply: enter X on day when drugs are collected and draw a horizontal line ( ) through the number of days supplied
- O = drugs not taken

**Sputum smear microscopy**

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Lab No.</th>
<th>Result</th>
<th>Weight (kg)</th>
<th>CXR</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>3-7-06</td>
<td>1120</td>
<td>2+</td>
<td>52</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>4-9-06</td>
<td>1350</td>
<td>Neg</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>5-12-06</td>
<td>1960</td>
<td>Neg</td>
<td>54</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>4-2-07</td>
<td>140</td>
<td>Neg</td>
<td>55</td>
<td></td>
</tr>
</tbody>
</table>

**Disease site (tick one):**

- Pulmonary
- Extra-pulmonary, specify

**Confirmatory evidence:** Y/N

- If Yes (tick) Histopathology/Bacteriology

**Type of patient (check one):**

- New
- Relapse
- Treatment after default
- Treatment after failure
- Transfer in
- Other, specify

**RHZE** (150/75/400/275)

**RHZ** (60/30/150)

**RH** (60/30)

**CXR**

**Weigh (kg)**
Exercise 2

You are a doctor incharge of BMU at your clinic. Review the following TB01 of Mrs. Nasreen and answer

a. can you declare treatment out come for Mr.Jamil
b. If Yes declare treatment outcome for Mr.Jamil
National Tuberculosis Control Programme

Tuberculosis Treatment Card

Name of Diagnostic Centre (BMU): Zubair Medical Complex Multan

Patient's Name: Nasreen
Father's/ Husband Name: Zulfiquar
Age: 22 years  Date of registration: 13-07-2006

Sex: ☐ M  ☐ F

Name/ address of patient Contact Person
with Phone no:

Name/ Type of treatment supporter with Phone no.

Disease site (tick one)
☐ Pulmonary
☐ Extra pulmonary, specify ___________

Confirmatory evidence Y/N
If Yes (tick) Histopathology/Bacteriology

Type of patient (check one)
☐ New
☐ Treatment after default
☐ Relapse
☐ Treatment after failure
☐ Transfer in
☐ Other, specify ___________

I. INITIAL PHASE - prescribed regimen and dosages

CAT (I, II): T

Number of tablets (per dose) and dosage of S:

CAT S

RHZE (150/75/400/275) S

RH (60/30) S

RHZ (60/30) S

Tick appropriate box after the drugs have been administered

Daily supply: enter ☐ . Periodic supply: enter X on (day) when drugs are collected and draw a horizontal line through the number of days supplied. O = drugs not taken

II. CONTINUATION PHASE

Number of tablets per dose

ADULT

CHILD

Treatment outcome
Date of decision __________

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

Comments:

a. can you declare treatment out come for Mrs. Nasreen
b. If Yes declare treatment outcome for Mrs. Nasreen
Exercise 3

You are a doctor incharge of BMU at your clinic. Review the following TB01 of Mr. Nawab and answer

<table>
<thead>
<tr>
<th>National Tuberculosis Control Programme</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Name of Diagnostic Centre (BMU):</strong> Raheem Clinic Pashawar</td>
</tr>
<tr>
<td><strong>Patient’s Name:</strong> Nawab Khan</td>
</tr>
<tr>
<td><strong>Father’s/ Husband Name:</strong> Shahab Khab</td>
</tr>
<tr>
<td><strong>Sex:</strong> M</td>
</tr>
<tr>
<td><strong>Age:</strong> 48 years</td>
</tr>
<tr>
<td><strong>Date of registration:</strong> 10-07-2006</td>
</tr>
<tr>
<td><strong>Patient Registration No.:</strong></td>
</tr>
<tr>
<td><strong>Name/ address of patient Contact Person:</strong></td>
</tr>
<tr>
<td><strong>Name of Treatment Center:</strong> Raheem Clinic Pashawar</td>
</tr>
<tr>
<td><strong>Address:</strong></td>
</tr>
<tr>
<td><strong>Name / Type of treatment supporter with Phone No:</strong> Babar (Imam) 7854259</td>
</tr>
</tbody>
</table>

### I. INITIAL PHASE - prescribed regimen and dosages

| CAT (I, II): | 1 |
| Number of tablets (per dose) and dosage of S: | |
| **RHZE (150/75/400/275)** | **RHZ (60/30)** | **RH (60/30)** |
| 3 | 3 | 3 |

**Tick appropriate box after the drugs have been administered**

- Daily supply: enter \( \blacklozenge \).
- Periodic supply: enter \( \times \) on day when drugs are collected and draw a horizontal line through the number of days supplied.

| Day | Month | 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 |
| Jul | X     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Aug | X     |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |
| Sep |       |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |   |

**Sputum smear microscopy**

<table>
<thead>
<tr>
<th>Month</th>
<th>Date</th>
<th>Lab No.</th>
<th>Result</th>
<th>Weight (kg)</th>
<th>CXR</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>11-7-06</td>
<td>1120</td>
<td>Neg</td>
<td>48</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>12-9-06</td>
<td>1350</td>
<td>Neg</td>
<td>50</td>
<td></td>
</tr>
</tbody>
</table>

**Disease site** (tick one)

- Pulmonary
- Extra pulmonary, specify

**Confirmatory evidence** Y/N

- If Yes (tick) Histopathology/Bacteriology

**Type of patient** (check one)

- New
- Relapse
- Treatment after default
- Treatment after failure
- Transfer in

- Other, specify

**RHZE** (150/75/400/275) 3

**RHZ** (60/30) 3

**RH** (60/30) 3

**SA D U L T**

**C H I L D**
### II. CONTINUATION PHASE

#### A D U L T

<table>
<thead>
<tr>
<th>Day</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
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<th>26</th>
<th>27</th>
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<tbody>
<tr>
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<tr>
<td>Dec</td>
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#### CHILD

<table>
<thead>
<tr>
<th>Number of tablets per dose</th>
</tr>
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<tbody>
<tr>
<td><strong>EH</strong> (150/400) 2</td>
</tr>
<tr>
<td><strong>RHE</strong> (150/75/275)</td>
</tr>
<tr>
<td><strong>RH</strong> (60/30)</td>
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</table>

Only supply: enter 'X'. Periodic supply: enter 'X on (day) when drugs are collected and draw a horizontal line through the number of days supplied. O = drugs not taken.

#### (Household) CONTACTS*

<table>
<thead>
<tr>
<th>Name of contact</th>
<th>Age</th>
<th>Method of Screening</th>
<th>Date &amp; Result of screening</th>
<th>Remarks</th>
<th>Treatment outcome</th>
<th>Comments</th>
</tr>
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</tbody>
</table>

**Treatment outcome**
- Cure
- Treatment completed
- Died
- Treatment failure
- Default
- Transfer out

---

c. can you declare treatment outcome for Mr. Nawab
d. If Yes declare treatment outcome for Mr. Nawab
SESSION 10: QUARTERLY REPORTING

SESSION OBJECTIVES

At the end of this session, the participants will be able to:

- Understand the TB reporting system
- Become familiar with the case finding, smear conversion and treatment outcome reports

QUARTERLY REPORTING IN TB

Tuberculosis control program monitoring at facility, district, province and national levels is based on preparation and analysis of the following three quarterly reports:

- Case Finding Report (TB07)
- Smear Conversion Report (TB08)
- Treatment Outcome Report (TB09)

The quarterly reports on case finding (TB07), smear conversion (TB08) and treatment outcome (TB09) are important reports in the routine recording and reporting system of the TB Control Program. The quarterly reports are produced during the first week of every quarter, by extracting data mainly from the District TB Register (TB03). The PPM Field Officer, in partnership with participating facility staff prepares and submits the quarterly reports to the District TB Coordinator who checks the completeness and consistency of the reports received. The TB Coordinator then produces district reports by compiling data from public as well as private sector facilities.

INTRODUCTION OF TB 07 FORM

The quarterly report on new cases and re-treatments of tuberculosis (TB07) shows the number of new pulmonary smear positive cases, relapses, treatment after default, treatment after failure, new pulmonary smear negative cases, extra-pulmonary tuberculosis cases and others positive and negative cases that were diagnosed and registered during a quarter (i.e. 3-month period). Transferred-in cases should not be included as they have already been reported as new cases in the previous quarterly report or at another diagnostic center. This report also tells about the suspects and contacts examined during last quarter.
National Tuberculosis Control Programme

Quarterly Report on TB Case Registration

INDIVIDUAL/CONSOLIDATED REPORT (tick one). In case of Consolidated report: Functional____ Reporting ____centres

Name of District: _________________ Name of BMU (Diagnostic Center): ____________
Name of TB Coordinator: _________________ Signature: ___________________

Patients registered during 1
______ quarter of year ______

Date of completion of this form: ___________________

<table>
<thead>
<tr>
<th>Blocks</th>
</tr>
</thead>
<tbody>
<tr>
<td>Block 1: All TB cases registered 2</td>
</tr>
<tr>
<td><strong>Sex</strong></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td></td>
</tr>
<tr>
<td>Male</td>
</tr>
<tr>
<td>Female</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

Block 2. New pulmonary sputum smear microscopy positive cases – Age group

<table>
<thead>
<tr>
<th>Sex</th>
<th>0-4</th>
<th>5-14</th>
<th>15–24</th>
<th>25–34</th>
<th>35–44</th>
<th>45–54</th>
<th>55–64</th>
<th>&gt; 65</th>
<th>Total</th>
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</tbody>
</table>

Block 3: Laboratory activity - sputum smear microscopy 4

<table>
<thead>
<tr>
<th>No. of TB suspects examined for diagnosis by sputum smear microscopy</th>
<th>No. of TB suspects with positive sputum smear microscopy result</th>
</tr>
</thead>
</table>

Block 4: Contacts Screening*

<table>
<thead>
<tr>
<th>Total No. of Contacts screened out through different screening tools</th>
<th>No. of confirmed TB cases detected through contacts screening</th>
</tr>
</thead>
</table>


TB07
National Tuberculosis Control Programme

First of all record the status of report, i.e. **individual or consolidated report**. In case of consolidated report, record the number of functional and reporting centers.

**THE TOP** of the form is used to record general information about the BMU (diagnostic center) and the district. It allows the provincial programme to quickly determine the district and the quarter that is being reported. In case of BMU (diagnostic center) report, the relevant column is checked and in case of consolidated report (generated at district level) total number of BMUs and No of reporting BMUs are mentioned.

**BLOCK 1** is divided into six main columns:

- 1st column is for sex i.e. male and female.
- 2nd column is Pulmonary smear-positive and it is sub divided into four columns i.e. New cases, relapses, after failure and after default. Each sub column is divided to show male and female distribution.
- 3rd column new smear-Negative pulmonary Tuberculosis and it is subdivided into three age groups. Each sub column is divided to show male and female distribution.
- 4th column is for extra pulmonary cases of tuberculosis and subdivided into three age groups. Each sub column is divided to show male and female distribution.
- 5th column is for other cases (all smear neg. and extra pulmonary cases previously treated for more than four Weeks will be reported hare
- The cases recorded in columns 1 to 4 will be added and recorded in total all cases according to male and female.

**BLOCK 2:**

- Block 2 presents the sex and age specific data on new pulmonary smear positive cases from Block 1. The result is a chart on new pulmonary smear-positive cases that has both sexes presented by specific age groups. The age groups used in Block 2 are internationally recognized age groups.
- When the report is completed, the total number in the BLOCK 2 column TOTAL should correspond to the total number in Block 1 under the heading **New Cases (1).**

There are two main reasons for reporting new pulmonary smear positive cases of tuberculosis by sex and age groups:

**To evaluate case finding:** To see if sex distribution of new pulmonary smear-positive cases is unexpectedly high (or unexpectedly low) in particular age group(s). See also if age distribution of new pulmonary smear positive cases is similar (or dissimilar) to the national or regional distribution.
To determine the trend of tuberculosis. To see if the number of cases for either sex, in a particular age group is increasing or decreasing. In successful programmes, there is a shift in age distribution towards older age groups.

**BLOCK 3:**

This block will be completed for evaluation of laboratory activities. No of TB suspects (examined for diagnosis) and number of TB suspects with positive smear microscopy result (2 or 3 smears positive) will be recorded in relevant columns.

**BLOCK 4:**

Report the diagnosed cases through contacts screening from TB03 and mention the exact figure of total screened cases in 1st column. In the 2nd column mention the exact figure of confirmed TB cases out of total screened out cases (the cases are included in block 1).

**INTRODUCTION OF TB 08 FORM**

The Quarterly report on smear conversion (TB08) indicates how many pulmonary smear positive (new and relapses and other re-treatment) cases, registered 3 to 6 months earlier, have been converted to smear negative (or have died, or defaulted or transferred to another diagnostic center) at the completion of 2/3 months of their treatment. The report also tells how many sputum smear negative cases, registered 3 to 6 months earlier, have died, or defaulted, or transferred out by the completion of 2/3 months of their treatment.

The report is produced, by extracting data on new cases and re-treatment cases from the previous report on new cases and re-treatments (TB07). This is done at each diagnostic center during the first week of every quarter. The pages of the TB03 register to be reviewed for the quarter is located by examining the “date of registration” column and identifying the pages with cases registered during the quarter 3 to 6 months earlier.

The report includes important indicators that can alert us that diagnostic and treatment arrangements are/ are not working effectively. The report also identifies early defaults and deaths among registered TB patients.
Quarterly Report on the Sputum Conversion after 2 and / or 3 Months Treatment of Pulmonary Tuberculosis Smear Positive Patients Registered 3 – 6 months earlier

INDIVIDUAL/CONSOLIDATED REPORT (tick one). In case of Consolidated report: Functional ____ Reporting ____ centres

<table>
<thead>
<tr>
<th>Name of District: ___________________</th>
<th>Name of BMU (Diagnostic Center): ____________</th>
</tr>
</thead>
<tbody>
<tr>
<td>Name of TB Coordinator: _____________</td>
<td>Signature: ________________________________</td>
</tr>
</tbody>
</table>

Patients registered during

_____ quarter of year _______

Date of completion of this form: _____________________

Sputum Conversion

<table>
<thead>
<tr>
<th>Type of case</th>
<th>Total number of patients registered during quarter *</th>
<th>Report on Sputum Conversion</th>
<th>Total number evaluated (sum of 1 to 5)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Smear Negative (1)</td>
<td>Smear Positive (2)</td>
<td>Died (3)</td>
</tr>
<tr>
<td>New sputum smear microscopy positive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Previously treated sputum smear microscopy positive</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other cases (Sputum smear negative, smear not done, EP, other previously treated ^).</td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

* Of those ___________ (number) were excluded from evaluation of chemotherapy for the following reasons : ____________________________________________________________

______________________________________________________________________________________________________________________

# Other Re-treatments includes: treatment after default, treatment after failure, and smear positive with H/O more than 4 weeks drug intake in the past
THE TOP of the form is used to record general information about the BMU (diagnostic center) and the district. It allows the provincial programme to quickly determine the district and the quarter that is being reported. In case of BMU (diagnostic center) report, the relevant column is checked and in case of consolidated report (generated at district level) total number of BMUs and No of reporting BMUs are mentioned.

The lower part of the form is divided into eight columns.

- **Type of cases (1):** The column is divided into three rows: New cases, previously treated smear microscopy positive (Relapse, Treatment after failure, Treatment after default) and smear negative (New smear negative and).
- **Patients Registered (2):** The number of new cases, previously treated smear microscopy positive and smear negative recorded in this column.
- **Smear Negative (3):** Number of patients who are found to be smear negative at the completion of 2/3 months of treatment. This is recorded separately for new cases (smear positive and negative) and re-treatments (relapses and other re-treatments).
- **Smear Positive (4):** Number of patients who are found to be smear positive at the completion of 2/3 months of treatment. This is recorded separately for new cases (smear positive and negative) and re-treatments (relapses and other re-treatments).
- **Died (5):** Number of patients (out of those under review) who died during the period being reported on.
- **Defaulted (6):** Number of patients (out of those under review) who defaulted during the period being reported on.
- **Transferred Out (7):** Number of patients (out of those under review) who were transferred out to another diagnostic center during the period being reported on.
- **Total Patients Evaluated (8):** Total number of patients evaluated (i.e. sum of column 3, 4, 5, 6, and 7).

The bottom of the form contains a space to write the number of cases excluded from the evaluation and the reasons why they were excluded.

**INTRODUCTION TO TB 09 FORM**

The quarterly report on treatment results (TB09) tells how many of the pulmonary tuberculosis cases, out of total registered 12 to 15 months earlier, have successfully or unsuccessfully completed their treatment. The successful treatment results include cured and treatment completed, whereas unsuccessful treatment results include treatment failure, defaulter, died, transferred out.

The report is produced, by extracting data from TB Register (TB03) for the quarter under reporting, at each diagnostic center in the first week of every quarter. The section of TB03 to be reviewed for the quarter is located by examining the “date of registration” column and identifying the pages with cases registered during the quarter 12 to 15 months earlier. So the report gives treatment outcomes for the cases registered and reported in case finding report 12-15 months earlier.
### Quarterly Report on the Results of Treatment of Pulmonary Tuberculosis Patients
Registered 12 – 15 months earlier

**INDIVIDUAL/CONSOLIDATED REPORT** (tick one). In case of Consolidated report: Functional___ Reporting ____ centres

| Name of BMU: ________________ | Name of BMU (Diagnostic Center): ________________ | Patients registered during
| Name of TB Coordinator: ________________ | Signature: ____________________________________ | ______ quarter of year_______ |
| | | Date of completion of this form: ________________ |

#### TB treatment outcomes

<table>
<thead>
<tr>
<th>Type of case</th>
<th>Total number of patients registered during quarter *</th>
<th>Treatment outcomes</th>
</tr>
</thead>
<tbody>
<tr>
<td>New sputum smear microscopy positive</td>
<td></td>
<td>Cure (1)</td>
</tr>
<tr>
<td>Previously treated sputum smear microscopy positive</td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other cases (Sputum smear negative, smear not done, EP, other previously treated ³)</td>
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</tr>
</tbody>
</table>

* These numbers are transferred from the *Quarterly Report on TB Case Registration* for the above quarter. Specify any exclusion.

The existing TB09 form should continue to be used, to save time in additional training and also the TREATMENT OUTCOME of RELAPSES, Tx >Failure and Default. The Tx outcome of EPT cases needs to be available, to know whether treatment completed.
**TB 09 form**

First of all record the status of report, i.e. **individual or consolidated report**. In case of consolidated report, record the number of functional and reporting centers. **THE TOP** of the form is used to record general information about the BMU (diagnostic center) and the district. It allows the provincial programme to quickly determine the district and the quarter that is being reported. In case of BMU (diagnostic center) report the relevant column is checked and in case of consolidated report total number and reported BMUs are mentioned.

The **lower** part of the form is divided into nine columns.

- **Type of cases (1):** The column is divided into three sections: New cases, previously treated smear microscopy positive and smear negative.
- **Patients Registered (2):** The number of New cases, previously treated smear microscopy positive and smear negative recorded in this column.
- **Cured (3):** Initially sputum smear positive patient who has completed the treatment (eight months) and is smear negative in the last month of treatment and on at least one previous occasion. Smear negative cases do not fall in this category.
- **Treatment completed (4):** Initially sputum smear positive patient who completed the treatment (eight months) and had negative smears at the end of intensive phase, but with no sputum examination at the end of treatment.
  
  OR
  
  Smear negative patient who received a full course of treatment (eight months).
- **Died (5):** Number of patients (out of those under review) who died during the period being reported on.
- **Treatment failure (6):** Smear positive patient who remained, or became again, smear positive five months or later after commencing treatment.
  
  OR
  
  Smear negative patient found smear positive at the end of 2nd month.
- **Defaulted (7):** Number of patients (out of those under review) who defaulted during the period being reported on.
- **Transferred Out (8):** Number of patients (out of those under review) who were transferred out to another diagnostic center during the period being reported on.
- **Total Patients Evaluated (9):** Total number of patients evaluated (i.e. sum of column 3, 4, 5, 6, and 7).

The bottom of the form contains a space to write the number of cases excluded from the evaluation and the reasons why they were excluded.