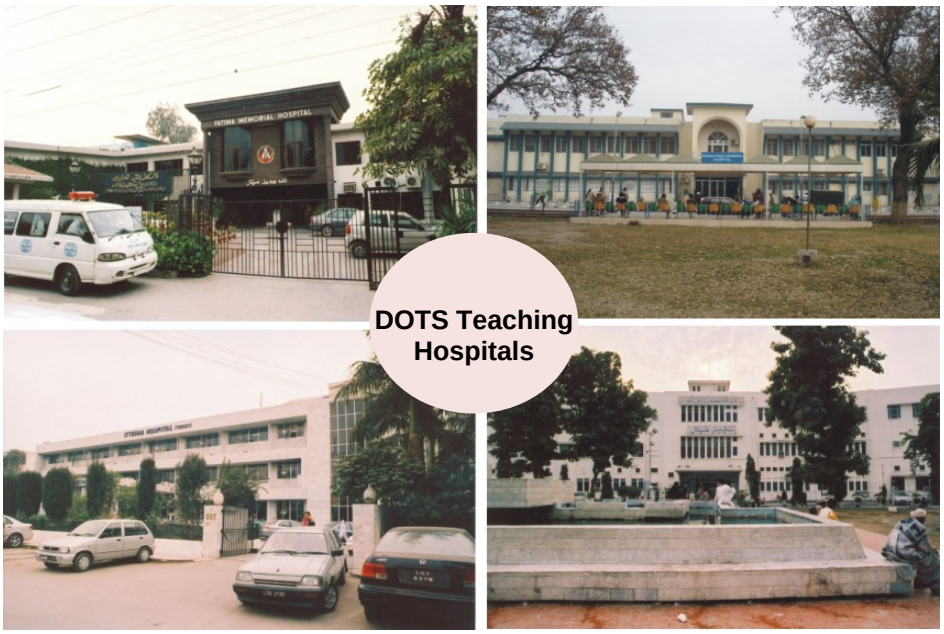
HOSPITAL LEVEL MONITORING EVENT

ON

COMMUNITY-BASED TB CARE - DOTS

GUIDELINES



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Guidelines
Hospital DOTS Monitoring Events
(Draft: June 25, 2007)

This document describes a structured event of intra-hospital monitoring, conducted every month to achieve certain agreed DOTS implementation outputs. Each hospital would also participate in the quarterly intra-district monitoring event, along with other diagnostic centers in the district.

1. Background

National TB Control Programme Pakistan has already achieved countrywide DOTS coverage in 2005. Since achieving the rapid expansion targets, the programme focus has mainly been to enhance the quality of DOTS implementation. Enhanced supervision and monitoring is considered to be a key to an improved quality of implementation. Pakistan is among few developing countries, where a systematic effort is being made to strengthen the monitoring and supervision of countrywide DOTS implementation. The Programme has already launched, with USAID/WHO support, a monitoring system with regular quarterly events at district, province and national levels. At each level, the monitoring event is expected to carryout the cohort analysis as well as to review and plan for the next quarter. However, preliminary review of the district and provincial monitoring experiences highlighted the need for a structured monitoring process to achieve the desired outputs.

The facility level monitoring has the pivotal role in the whole monitoring process. To make the facility level monitoring supportive of the district level events, the facility level monitoring need to focus on the management of individual TB cases attending the facility. Whereas, the district and province level monitoring focus more on a group of TB cases being managed at facilities and districts respectively.

The TB Control Programme has already developed a set of guidelines and tools for more structured monitoring events at facility, district, province and national levels. These guidelines and tools are currently being evaluated through piloting in selected districts. In light of early implementation experiences, these guidelines and tools will be revised before countrywide scaling-up. The tertiary and private hospitals differ in context from a routine health facility e.g. rural health center. The main difference is the size and scope of work in the two types of facilities. In hospitals, the clinical, the laboratory, the registration and treatment support, and the pharmacy services are offered through "stations" working under different departments. This multiplicity of command structure poses a challenge of coordinating DOTS activities across departments within a hospital. An intra-hospital monitoring event needs to address these complexities of multiple stakeholders involved in various dimensions of DOTS implementation in a hospital.

The objectives and outputs for the hospital monitoring process are outlined. Then inputs, case management and laboratory functioning review is described in section 4. The detail of organizing, conducting and documenting the intra-hospital monitoring meeting is described in section 5. The tools for recording the monitoring data as well as actions are given in Appendices-A and B.

2. Purpose and Objectives

2.1 The **aim** is to improve the TB case finding and treatment outcomes at the hospitals. The **purpose** is to improve the onsite technical and management support to the hospital staff working at all four key DOTS service stations. This would supplement the ongoing monitoring events at the facility, district and province levels.

2.2 The **objectives** are:

- To check and compile monthly data on availability of inputs and case management practices in the hospital.
- To analyze every month the nine selected programme performance indicators, and suggest and record the actions for respective hospital.
- To check and compile the quarterly case management data and prepare quarterly reports for the facilities i.e. TB07, TB08, and TB09 (only during the first month of each quarter).
- To enable the hospital staff to collectively review the hospital performance of case management and laboratory functioning, and plan actions accordingly.

3. Desired Outputs

The intra-hospital monitoring event comprises three review sessions i.e. input, case management, and laboratory functioning.

3.1 Input Review Session:

- Availability of human and material inputs reviewed, and
- Actions taken or suggested and recorded for addressing the input gaps.

3.2 Case Management Review Session:

- Practices and gaps in screening of TB suspects and registering of TB cases reviewed, with the help of outpatient data and TB04, and action planned or taken accordingly.
- TB01 and TB03 updated, in light of TB04 data and other information available with the DOTS Facilitator(s).
- Practices and gaps in managing the registered TB cases reviewed, with help of TB01, TB03 and TB04, and noted.
- Nine selected key program indicators analyzed and actions suggested accordingly.
- Selected data compiled into a monthly hospital monitoring form and record is maintained by the DOTS Focal Person in the hospital.

3.3 Laboratory Functioning Review Session

- EQA-1 form reviewed, and
- Actions planned for addressing the material as well as capacity gaps.

The period under review is generally the last completed month. The action note table is used to record the planned actions for the hospital.

4. Arrangements

Intra-hospital monitoring meeting is attended by: DOTS Facilitator(s), laboratory focal person, doctor(s) at clinical service station, and a representative of hospital management. The Hospital Focal Person (DOTS) facilitates the proceedings of the monitoring meeting. The *Hospital EQA Person* also participates. The District TB Coordinator may occasionally attend the meeting, where feasible and/or requested.

The meeting is arranged every month, at an agreed venue convenient to all participants. The meeting generally requires about 2 - 3 hours time. The seating arrangement (preferably U shaped, where feasible) is required for about 5 - 8 persons. No audio-visual equipment or other hardware is required. Modest refreshment/tea may be served to the participants, where feasible.

In FIDELIS project districts

Regional Coordinator ASD also participates in the intra-hospital monitoring meeting.

5. How to organize, conduct and document?

5.1 How to schedule the meeting and invite the participants?

Hospital Focal Person, in consultation with other participants, fixes a day, time and venue for intra-hospital meeting. For example 11.00 am every first Monday of the month in Room No. 7 in the Medical OPD. It is preferred to stick to the plan, unless unavoidable circumstances require a change in the plan. In case of change in venue, day or time, the Hospital Focal Person suggest an alternate and organize the meeting accordingly. Each participant is instructed what record he/she will bring to the meeting e.g. input data, case management data (TB04, TB03, TB01) etc.

5.2 How to prepare for the meeting?

5.2.1 DOTS Focal Person:

- Gets the hospital monitoring file, and reviews the past performance and the gaps at the hospital. Also gets himself updated on the progress made on actions agreed in the previous meeting. The HFP carries this file to the intra-hospital monitoring meetings.
- Also gets updated information about the resource availability at hospital level.
- Gets two blank sets of "Hospital Monitoring Form".
- Ensures that Hospital EQA person visits the hospital laboratory to complete EQA-1 form, for discussion in the monitoring meeting (i.e. session-III of the meeting).

5.2.2 DOTS Facilitator

- Collects in-time the required data/information about:
  - Availability of inputs (page-1 of Monitoring Form)
  - Case management practices (Table on page-2 of Monitoring Form)
- Bring the updated records i.e. TB01 and TB03 for the hospital.

5.2.3 Laboratory focal person

- Brings an updated TB04.

5.3 How to conduct an intra-hospital monitoring meeting?

The intra-hospital monitoring meeting is conducted as an interactive event, with active involvement of all the participants. DOTS Focal Person sits with the participants, preferably in a "U" shaped sitting arrangement. DOTS Focal Person facilitates the participants to review the availability of inputs as well as case management practices during the month under review. DOTS Focal Person maintains a file; in which filled monitoring form is filed every month, along with other relevant record e.g. action note sheet.

5.3.1 **Input Review Session**:

- Information, brought by DOTS Facilitator, about the current stock level of material inputs and availability of trained staff in the hospital is reviewed. This data on input availability is recorded in the shaded cells of the four tables on page-1 of the Facility Monitoring Tool. These entries are crosschecked/verified by the DOTS Focal Person.
- In case of **print materials** and **drugs**, the participants identify "material items" where current available stock levels are below the minimal stock levels. The **recorded gap** in the availability of print materials and drugs is discussed. In case of gap:
    - DOTS Focal Person manages, where possible, a minimum quantity of the required material for the immediate use of the hospital (through hospital or the programme resources). The agreed activity/plan is recorded in "action note sheet".

- In case of **staff** availability and capability, the participants identify the staff category where gap has been reported at the hospital. The **recorded gap** in the availability and/or capability of the staff is discussed.
    - If gap is related with the staff **availability**:
        - DOTS Focal Person discuss and agree on either: a) adjusting the responsibilities of available staff so that he/she can give due time to DOTS work, b) providing another person to supplement/substitute the work of current staff, c) any other (specify)

    - If gap is related with the staff **capability**:
        - DOTS Focal Person discuss and agree on either: a) training or retraining the available staff, or b) reassigning the job to another available and potentially able person, c) any other (specify)

5.3.2 **Case Management Review Session**

This session relies mainly on reviewing the compiled case management data (i.e. Table E, page-2 of Monitoring Form) for the month under review. The DOTS Facilitator compiles the required data mainly from OPD register, TB laboratory register (TB04), TB patient register (TB03), and TB patient card (TB01). The method for compiling data is given in Appendix-B. This filled table is brought to the meeting for the participants to review, discuss and plan measures to improve case management practices in the hospital.

- The participants are asked to calculate the statistic for nine selected indicators on the basis of given formulae, and record the figure in the column "Observed" in Table F.
- The DOTS Focal Person and the participants, with the help of indicator analysis table, tries to understand the possible reasons for the situation and suggest tentative actions accordingly. These suggested actions are "tentative" and "advisory" in nature, for the hospital management to

consider. These reasons and suggested actions are recorded in "Table F" of the Facility monitoring form. The actions proposed, on current case management practices, to the hospital management may include the following two type of activities:

- Exploratory activity to further clarify the situation and/or reasons
- Corrective activity to address the problem/gap

- DOTS Focal Person gets a filled copy of Facility Monitoring Form and keeps it in a separate file.
- The Hospital Management is expected to review the filled form, and consider implementing, as per current circumstances, all/some of the suggestions made in the monitoring meeting.

- *During the monitoring meetings held in the first month of a quarter, TB07, TB08 and TB09 (i.e. quarterly reports) for the hospital are prepared and reviewed.*
- *In FIDELIS project hospitals, the Regional Coordinators also: a) completes/updates their TB03, b) review and update patient access data, c) and note the number of NSS+ registered during the same month last year.*

5.3.3 Laboratory Functioning Review Session

- The Hospital EQA Person shares his observations on hospital laboratory performance, including results of sample slide reexamination, with the participants (mainly the filled EQA-1 form).
- The gaps in material inputs and staff ability/practice are discussed, including possible reasons and feasible corrective measures.
- The agreed actions/plans are recorded in "action note sheet" and filed with DOTS Focal Person.

Indicator Analysis Table

Indicator	Expected range	If less than expected		If more than expected	
		Reasons	Actions	Reasons	Actions
% OPD suspected for TB	2 or more	- Suspect identification practice not correct. - Laboratory does not entertain all suspects.	- Train/ instruct the doctor - Modify the laboratory functioning	- Doctor incorrect practice	- Train/ instruct doctors to follow NTP guidelines
% suspects found NSS^+	8 – 12%	- Poor quality of AFB testing. - Poor clinical screening of TB suspects	- Strengthen the EQA - Train/ instruct doctors to follow NTP guidelines	- Poor quality of AFB testing - Only highly probable cases are referred for AFB testing.	- Strengthen the EQA - Train/ instruct doctors to follow NTP guidelines
% of S^+ not registered.	0%	-	-	- Pts. transfer out to another diagnostic center/ district - Pts. fail to re-visit the facility.	- Review the referral arrangements. - Improve retrieval & registration of pre-register defaults.
Proportion of CAT-II cases among total smear-positive registered	10 – 20%	- Poor categorization of newly registered TB patients.	- Train/ instruct doctors to follow NTP guidelines	- Diagnosis practice not correct. - High default of new cases in the district	- Train/ instruct doctors - Improve default rate through better support & retrieval.
% NSS^+ among new patients of pulmonary TB.	40 – 60%	- Poor quality of AFB testing - Diagnosis practice not correct.	- Strengthen the EQA - Train/ instruct doctors to follow NTP guidelines	- Poor quality of AFB testing (FP) - NTP criteria to diagnose smear-negative cases are not followed.	- Strengthen the EQA - Train/ instruct doctors to follow NTP guidelines

Indicator Analysis Table

Indicator	Expected range	If less than expected		If more than expected	
		Reasons	**Actions**	**Reasons**	**Actions**
% NSS^+ got converted at completion of 2/3 months.	80 – 90%	1. Pt. examined but not recorded in TB03. 2. Patients attend but smears not done. 3. Smears done but conversion low due to: 3a) Inadequate treatment 3b) Low patient compliance 3c) Poor quality of AFB testing 4. Patients don't attend (default, died, transfer)	Update the TB03. 2. Train/ instruct doctors & lab. staff 3a) Train/ instruct doctors 3b) Improve patient support arrangements. 3c) Strengthen the EQA 4. See rows below.	- High patient compliance - Poor quality of AFB testing	- Encourage the staff. - Strengthen the EQA
% NSS^+ defaulted in the first 2/3 months.	5% or less	- Reporting error (defaulters are classified as transferred out etc.) - Good case management work	- Review and exclude/rectify the reporting errors. - Acknowledge the good work.	- Poor treatment support - Poor retrieval arrangements - Poor perceived quality of care	- Improve Rx. support - Enhance retrieval arrangements - Understand/ address the perceived quality of care issues.
% NSS^+ transferred out in the first 2/3 months.	5% or less	- Reporting error (transfer out is reported as defaulters) - Good case management work	- Review and exclude/rectify the reporting errors. - Acknowledge the good work.	- Reporting error (defaulters are classified as transfer out etc.) - Facility registers too many patients from far areas. - Facility transfer out many pts. for some other reason	- Review and exclude/rectify the reporting errors. - Encourage registration of pts. from catchment pop. - Identify the reason and respond.
% absentee retrieval action taken	100%	- Poor staff knowledge and supervision. - Poor recording of addresses - Inadequate logistic support	- Train and supervise staff - Improve provision of printed letters/ envelops.	-	-

HOSPITAL DOTS MONITORING TOOL

Name of Hospital _____ **Catchment Population**_____

Month under reporting _____ **Meeting Date** _____

A. PRINT MATERIALS

Item	Minimal Stock Level	Stock available	Stock Replenishment		Comments/Required Action
			Supplied	To Arrange	
TB01	500				
TB02	500				
TB03	2 register				
TB04	1 register				
TB05	2 pads				
TB07, 08, & 09	1 register				
Treatment Support Card	500				
Request for Rx. Support	5 pad				
Hard to access cards	500				

B. DRUG

Drugs	Minimal Stock Level	Stock available	Stock Replenishment		Comments/ Required Action
			Supplied	To Arrange	
HRZE	10,500				
HE	17,250				
S	500				
RHE	4800				
Weighing Scale	1				

C. STAFF AVAILABILITY

Category	Staff		Comments/ Required Action
	#Available	#Trained	
DOTS Doctor			
DOTS Facilitator			
Lab. Person			

Stock entries checked: **Signatures of SMO/ I/C:** _____

D. CASE MANAGEMENT PRACTICES Facility: _____ Month under review:_____

OPD (FR3)	Lab. (TB 04)			Registration (TB 03)					Case management (TB 03)									
Number Examined (last month)				Number of patients registered					Pt who started their intensive phase during month under review			Pt who started their treatment same month previous quarter (i.e. 1st, 2nd or 3rd month of the previous quarter)					Absentee patients (TB01)	
Attendee	TB suspects		Patient	Smear Positive				Smear Negative	# Smear Positive (only)			Conversion (NSS^+)					#	Action taken
	AFB tested	Found positive	Follow-up	New	Retrea-tment (CAT2)	Total (CAT 1 & 2)	Pre-reg referral	New	Correct Regimen (TB01)	Correct Dose (TB01)	Rx. support noted	# Total started	# Convert	# Default	# T. Out	# Correct Regimen (contin.)		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19

E. INDICATORS/ ANALYSIS

Activity / Indicator	Formula (x100)	Situation		Reason for Variation	Proposed Actions
		Expected	Observed		
1. Proportion of OPD suspected for TB	**D.2 / D.1**	**2%**			
2. Proportion of suspects found new smear positive (NSS^+)	**D. 5 / D.2**	**10%**			
3. Proportion of S^+ not registered (i.e. pre-registration default)	**D. 8 / D. 3**	**0%**			
4. Proportion of S^+ registered as Cat II	**D. 6 / D. 7**	**> 10%**			
5. Proportion of NSS^+ among all new pulmonary TB patients	**D.5 / (D.5 + D.9)**	**> 40%**			
6. Proportion of NSS^+ found converted	**D. 14 / D. 13**	**> 85%**			
7. Proportion of NSS^+ found defaulted	**D. 15 / D. 13**	**< 5%**			
8. Proportion of NSS^+ transferred out	**D.16 / D.13**	**< 5%**			
9. Proportion of absentee retrieval action	**D.19 / D.18**	**100%**			

F. FIDELIS Specific Data

Updating of Coordinators TB03	Patient Access Data				NSS+ registered during same month last year
	# Hard		# Easy		

Prepared by: _____ **Counter signed by:** _____

Appendix-B

DOTS REVIEW/PLAN MEETING: HOSPITAL: _____, Date: _____

ACTION NOTES

Main Gaps	Agreed Action	Responsible	Dead line	Remarks
Inputs				
Case management				
Laboratory functioning				

Prepared by: _____ **Counter signed by: _____**

5.3.2 **Compiling Data on Case Management**

- This session relies mainly on reviewing the patient records and identifying the required actions for the hospital. Main findings related with case management practices are recorded in Table D of the Hospital DOTS Monitoring Form.
- Total number of **outpatient** attendance in recorded from:
  - medical and chest outpatient register at hospitals (provided "suspect screening service station" is working in both places)
- The DOTS Facilitator reviews the TB04 of the hospital (for the month under review).
  - The number of TB suspects examined for diagnosis (AFB) are counted and recorded in column 2 of Table D.
  - The number of TB suspects for whom one or more slide is found positive is counted and recorded in column 3 of Table D.
  - The number of registered TB patients examined for follow-up examination is counted and recorded in column 4 of the Table D.
- The DOTS Facilitator separates the TB01 of all newly registered smear-positive and smear-negative TB patients (for the month under review).
  - Check if all the TB suspects found positive in TB04 have been registered (i.e. TB01 is available). The number of pre-registration referral of smear-positive patients is also recorded in column 8 of Table D

  (Note: pre-registration default is patients found smear-positive in TB04 but found not registered in TB01 or not referred in the *pre-registration referral register*. The possible retrieval action i.e. letter writing is considered and taken, where found feasible, for the pre-registration defaults).
- The DOTS Facilitator reviews the TB03 for all the newly registered TB patients, and:
  - Check if all the newly registered TB patients (i.e. for whom TB01 has been prepared) have been entered completely and correctly in the TB03 (i.e. all the relevant cells have been filled and there is no discrepancy between TB01 and TB03 data).
  - In case of discrepancy in TB01 and TB03 data, the DOTS Facilitator review the relevant records and sort out the discrepancy in patient records.
  - Count and record the number of new smear-positive, re-treatment (CAT-II), and new smear negative patients registered in the columns 5, 6 and 9 respectively. Also add the new and re-treatment smear-positive cases and record in column 7 of Table D.
- The DOTS Facilitator reviews the TB01 of all newly registered smear-positive (both new and re-treatment) TB cases.
  - The number of patients who have been prescribed right regimen in right dosage are counted and recorded in the columns 10 and 11 respectively. The DOTS Facilitator uses the prescription table, given in the case management desk guide, for guidance on correct regimen and dosage for registered patients.

- In case, deviation in regimen and/or dosage is observed, the DOTS Facilitator takes note and informs the DOTS Focal Person. The issue is discussed with the concerned Medical Officer during the monitoring meeting.
- The number of newly registered TB patients for whom an identified treatment supporter has been noted on TB01 are counted and recorded in column 12 of Table D.
- In cases where treatment supporter is not noted for one or more smear-positive patients, the issue is discussed in the monitoring meeting to agree on feasible future actions.

- The DOTS Facilitator reviews the TB03 for the cohort of patients registered in the same month previous quarter i.e. if 2nd month of quarter 3 is currently being reviewed then patients registered in the 2nd month of the quarter 2 are reviewed for smear conversion (i.e. intermediary outcome). Only new smear positive cases registered during that month are reviewed for:
  - Total number of new smear positive (NSS^+) cases registered during that month are counted and recorded in column 13 of Table D.
  - TB01 of all the NSS^+, registered during that month, are reviewed to check the regimen prescribed for the continuation phase. The number of patients for whom continuation phase regimen is found correct is counted and recorded in column 17 of Table D.
  - In case, deviation in continuation phase regimen is observed, the DOTS Facilitator takes note and informs the DOTS Focal Person. The issue is discussed with the concerned Medical Officers in the monitoring meeting.
  - The number of NSS^+, registered during that month, found converted at the completion of 2/3rd month are counted and recorded in column 14 of Table D. The apparent non-conversion at 2/3 months can be due to: a) TB03 records not been updated, b) patient attended but not examined, c) patient examined but found not converted, and d) patient being defaulted, referred out or dead. TB01 and TB04 are reviewed for these non-converted patients, and action is suggested accordingly (with the help of Indicator analysis table – page 7 and 8).
  - The number of NSS^+, registered during that month, found defaulted by the completion of 2/3rd month are counted and recorded in column 15 of Table D. The reasons for high default are discussed and actions suggested during the indicator analysis process (see below).
  - The number of NSS^+, registered during that month, found transferred out by the completion of 2/3rd month are counted and recorded in column 16 of Table D. The reasons for high transfer out are discussed and actions suggested during the indicator analysis process (see below).
- The participants are requested to review TB01 of all under-treatment TB patients to identify those who have not collected their monthly supply of drugs for fifteen days or more after the due date. The number of such absentee patients is recorded (column 18), and retrieval action (letter writing and/or home visit) is ensured. The number of absentees for whom the required retrieval action has been taken is recorded in column 19 (Table D).