

# Component 4: Data Management and Logistics Tool

## ***Why the data management component of the tool?***

Systematic record keeping plays another crucial role to a well functioning TB program. Good record keeping is necessary for following and managing individual patients effectively, determining whether the program is performing according to accepted standards, and identifying problems that require corrective actions (1).

## ***Who should do this evaluation?***

The evaluator should be a clinician or TB expert with knowledge of the clinical and programmatic care side of TB treatment. As always, guidelines from the National TB Program (NTP) in the host country and the refugees' country of origin should be followed and used as a reference. In addition, other references are provided (1, 20).

## ***Further explanation of tool***

There are 3 parts:

1. Evaluation worksheet for evaluator to complete
2. Scoring guide that provide suggested scores, rating, and comments and recommendations section
3. Explanation worksheet that explains the importance of each item scored, including references

The point values are assigned from the experience gained during the pilot testing and are only suggestions. If you, as the evaluator, believe the scoring should be different that is appropriate your experience along with the tool should direct your scoring. Resulting scores (suggested or locally adapted) of sub-sections of this component would be important to share with the program because the component covers a broad range of topics and different sub-sections may have different levels of competencies. In addition, you may want to give partial points. Partial item point values should be explained and recommendations given in the **Comments and Recommendations** section after the score guide. If major deficiencies are observed in any sub-section during the evaluation, the evaluator should intervene to improve the program where needed.

# Part 1: Data Management Evaluation Worksheet

Site \_\_\_\_\_ Country \_\_\_\_\_ Date \_\_\_\_\_  
dd/mm/yy

Write point score in last column if item passed. Write “0” if item failed. Write N/A if “not applicable” or N/E if “not evaluated.”

Item No.	Point Value	Description (explanations of these items are on the next sheet)	Score Suggested
		<b>Registers: Evaluator</b>	
1	42	Observes patient registry exists and is functional	
		<b>Record Keeping for Diagnosis and Treatment: Evaluator observes</b>	
<p><b>For items 2-6:</b> Arbitrarily (not consecutive) select 10 TB medical records of the last 5 months for patients in continuation phase (If 9-10 medical records are correct for an item, give 4 points; if 7-8 medical records correct, give 3 points; if 5-6 medical records correct, give 2 points; if less correct, give 0 points)</p> <p>If medical records are not used, check appointment cards of 5 patients (If 5 appointment cards are correct for an item, give 4 points; if 4 appointment cards correct, give 3 points; if 3 appointment cards correct, give 2 points; if less correct, give 0 points) for:</p>			
2	4	Results of initial smear indicated	
3	4	Smears examination at 2 months indicated	
4	4	Additional smears indicated (at 5 months, at end of treatment)	
5	4	Dates and regimen of intensive phase of treatment indicated (Give 2 points for each [date and regimen] if written for each visit; give 1 point for each, if 1 missing; give 0 points, if 2 or more missing)	
6	4	Dates and regimen of continuation phase of treatment indicated (Give 2 points for each, if written for each visit; give 1 point for each, if 1 missing; give 0 points, if 2 or more missing)	
		<b>Reports: Staff can provide evaluator</b>	
7	3	Monthly or quarterly (every 3 months) reports for number of patients	
8	3	Monthly or quarterly reports for patient types—pulmonary/ extrapulmonary, smear-positive/smear-negative	
9	4	Monthly or quarterly reports for patient outcomes—rates for cure, treatment completion, default, relapse, transfer, death	
10	3	Clinic gives numbers to the National TB Program on at least quarterly basis	
11	3	Clinic gives numbers to HIS (Health Information System of United Nations Refugee Agency—put N/A, if not refugee setting) on a monthly basis	
		<b>Default Tracing</b>	
12	4	Healthcare workers (HCW) uses 14 days after overdue appointments for tracing default patient in intensive phase (If tracing at 21- 30 days, give 2 points; if tracing at 28-35 days, give 1 point)	
13	4	HCW uses 2 months after overdue appointments for tracing default patient in continuation phase (If tracing at 3-4 months, give 2 points; if tracing at 4-5 months, give 1 point)	
14	4	Clinic has default rate $\leq 10\%$ (If 11%-15%, give 2 points; if $>15\%$ , give 0 points)	

## Part 1: Data Management Evaluation Worksheet

Item No.	Point Value	Description (explanations of these items are on the next sheet)	Score Suggested
		<b>Contact Tracing and Treatment: <i>Clinic</i></b>	
15	4	Has proportion of pediatric patients (<15 years old) to total patients $\geq 11\%$ <i>(If 5%-10%, give 3 points; if &lt;5%, give 0 points)</i>	
		<b>Treatment, Medication, Supplies: <i>Clinic</i></b>	
16	4	Has sufficient supply of anti-TB drugs to allow for 2 months beyond next shipment <i>(If 1 month, give 3 points)</i>	
17	4	Maintains drugs in appropriate location (not too hot—this can be assured with thermometer monitoring temperature during the hottest time of day)	
18	4	Drugs are from a reputable source, such as the National TB Program	
19	4	Does not have expired drugs	
20	3	Has adequate supplies of needles, syringes, diluent for injection for 2 months beyond next shipment <i>(If 1 month, give 2 points)</i>	
A		<b>Score Achieved</b> (add score achieved for items 1-20)	
B		<b>Subtract Number of N/A OR N/E Responses</b>	
C		<b>Suggested Total Score Possible</b> (73 points possible minus value in line B, above)	



# Part 3: Data Management Explanation Worksheet

Item No.	Explanation												
	<b>Registers</b>												
1	Good record keeping is important for a well-functioning laboratory and clinic. Actual register books or logs should be provided by National TB Program (NTP). Observe registries and check for continual entries (no missing weeks or months that are not during holidays). Ensure that only one register each per lab, suspect TB, and TB patients is used at a time.												
	<b>Record Keeping for Diagnosis and Treatment</b>												
2-6	Accurate record keeping is a key requirement for good program performance. Use NTP or WHO guidelines for frequency of sputum examinations. A common frequency is to have sputum examination results recorded at the start of intensive therapy; after 2-3 months of therapy (at completion of intensive therapy); after 5 months of therapy; and at completion (6 or 8 months) of therapy. Use WHO (13) or NTP first-time and retreatment regimens.												
	<b>Reports</b>												
7-10	<p>Regular analysis and reporting of cases is a key requirement for good program performance. Observe either monthly or quarterly (every 3 months: January-March, April-June, July-September, October-December) tallies and reporting system. Reporting aggregated data to NTP is important for good program management. This should occur on at least a quarterly basis.</p> <table border="1"> <tr> <td>Reported analyses include (1):</td> </tr> <tr> <td>• Number of suspect cases (lab registry)=A</td> </tr> <tr> <td>• Number of sputum samples examined (lab registry)=B</td> </tr> <tr> <td>• Number of positive sputum smears (lab registry)=C</td> </tr> <tr> <td>• Number of smear-positive patients=D</td> </tr> <tr> <td>• <b>Percent positive smears</b> [(C divided by B)*100]</td> </tr> <tr> <td>• <b>Percent of smear-positive patients</b> [(D divided by A)*100]</td> </tr> <tr> <td>• <b>Cure rate</b>=Number of patients smear-negative in last month of treatment divided by those with newly diagnosed smear-positive TB (&gt;85% is global cure rate target) or divided by those alive at end of treatment (survivors) in same period of time.</td> </tr> <tr> <td>• <b>Default rate</b>=Number of patients whose treatment was interrupted for &gt;2 consecutive months divided by the number with newly diagnosed smear-positive TB in same period of time.</td> </tr> <tr> <td>• <b>Relapse rate</b>=Number of patients who were previously treated and cured or completed treatment and now smear-positive divided by the number with newly diagnosed smear-positive TB in same period of time.</td> </tr> <tr> <td>• <b>Transfer rate</b>=Number of patients who were transferred to another TB program to continue treatment divided by the number with newly diagnosed smear-positive TB in same period of time.</td> </tr> <tr> <td>• <b>Death rate</b>=Number of patients who died from any cause during treatment divided by those with newly diagnosed smear-positive TB (&gt;85% is global cure rate target) or divided by those alive at end of treatment (survivors) in same period of time.</td> </tr> </table>	Reported analyses include (1):	• Number of suspect cases (lab registry)=A	• Number of sputum samples examined (lab registry)=B	• Number of positive sputum smears (lab registry)=C	• Number of smear-positive patients=D	• <b>Percent positive smears</b> [(C divided by B)*100]	• <b>Percent of smear-positive patients</b> [(D divided by A)*100]	• <b>Cure rate</b> =Number of patients smear-negative in last month of treatment divided by those with newly diagnosed smear-positive TB (>85% is global cure rate target) or divided by those alive at end of treatment (survivors) in same period of time.	• <b>Default rate</b> =Number of patients whose treatment was interrupted for >2 consecutive months divided by the number with newly diagnosed smear-positive TB in same period of time.	• <b>Relapse rate</b> =Number of patients who were previously treated and cured or completed treatment and now smear-positive divided by the number with newly diagnosed smear-positive TB in same period of time.	• <b>Transfer rate</b> =Number of patients who were transferred to another TB program to continue treatment divided by the number with newly diagnosed smear-positive TB in same period of time.	• <b>Death rate</b> =Number of patients who died from any cause during treatment divided by those with newly diagnosed smear-positive TB (>85% is global cure rate target) or divided by those alive at end of treatment (survivors) in same period of time.
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11	United Nations Refugee Agency (UNHCR) Health Information System (HIS) should be used as the reporting system for refugee camps. HIS has the ability to generate Ministry of Health reports.												

## Part 3: Data Management Explanation Worksheet

Item No.	Explanation
	<b>Default Tracing</b>
12-14	Aggressive education about adherence throughout treatment process and home visits to trace nonadherent patients as soon as they interrupt their treatment (at time of second missed visit) is paramount to successful TB control program. Use outreach workers, such as TB treatment supporters to achieve this. Default rate is an excellent indicator of how well your program is doing. This rate should be analyzed on a quarterly basis and should remain <10%.
	<b>Contact Tracing</b>
15	High rates of childhood TB (less than 5 years of age) compared with total cases imply good rates of contact tracing and case ascertainment for a program. Over 40% (33%-50%) of household contacts can be infected (5), with children having a greater risk of progressing to disease.
	<b>Treatment, Medication, Supplies</b>
16-17	For good program performance, guarantee the supply and quality of medications. Days of drugs out of stock can increase risks for developing drug-resistant TB. Because tropical countries with hot climates have a high rate of TB disease, maintaining drugs and not using expired drugs is paramount.
18-19	In addition to stock-outs, drugs that are expired or not tested for efficacy can lead to drug resistance. Drugs must always be procured from a reputable institution, such as the NTP. Quality assurance of the medications needs to be a part of the determination of their efficacy.
20	For good program performance, guarantee the stock of supplies.