

## How to Monitor

### *Design of a Monitoring Exercise*

The design of a study will depend on many factors including specific objectives, various components of national programmes, national health infrastructure, health systems, and population and geographical size of the country. Only the practical aspects are discussed below as it is not possible to give a 'universal' outline. Key issues are the size and the selection of samples. All suggestions made in this document are based on some statistical theories, but most of them are empirical. The selection of samples should be made in collaboration with national programme managers, experts and WHO consultants and be based on all existing information.

### Steps Taken by LEM Monitors

In order to produce results that are reliable and comparable across studies and countries, the indicators should be measured in a standardised way. The following list outlines the sequence of steps to be carried out by MDT monitors in collaboration with the national programme manager:

- X Specify monitoring objectives;
- X Discuss methods for measuring indicators;
- X Select a sample of health facilities;
- X Implement field work;
- X Record data for indicators;
- X Prepare summary tables;
- X Report to participating facilities, national authorities and WHO;
- X Follow-up.

### Qualifications of LEM Monitors

Monitors should have some background in public health and leprosy control and preferably be fluent in the language of the area or region in which they will be visiting. They should be independent of the national programme so that they can be objective and constructive in assessing the leprosy situation in the country.

## Inventory of Data Sources

Considering that monitoring will be only retrospective, the most important step is to identify at what levels sources of data can be found. In most countries, information on leprosy can be found at:

- X patient level: individual records, examination and interviews of patients
- X community level: interviews
- X treatment level: this will vary from one country to another: health centres, leprosy clinics, specialised institutions, district hospitals
- X management level: leprosy registers and reports are usually kept at district, state/region and national levels.

## Defining the Sample Size

It is assumed that the sample units for this study will be *leprosy patients*. As discussed in the previous section, it is suggested to collect information on at least:

- X 200 patient records for indicators on prevalence and case finding activities ;
- X 200 patients taken out of treatment registers and/or individual records for accessibility of MDT and case holding;
- X Interviews from 50 patients for delay in diagnosis and accessibility of MDT;
- X Interviews from 50 individuals in communities for IEC;
- X All national and sub-national reports of the 5 previous years trends.

## Selecting the Sample Units

This is the most difficult step which will need preparation and discussions with national authorities. While the sample units are patients, the sampling has to be done in several steps, in order to take into account geographical, demographic and health infrastructure differences within the same country. The following method is suggested:

1. Select arbitrarily two or three geographic areas if it appears that there are important differences in terms of population, health systems or prevalence of the disease. In many countries for example, it is possible to grossly differentiate between Northern and Southern parts.
2. For each of the geographic areas selected, prepare a list of □districts□, including population and number of registered leprosy patients
3. Randomly select 2 districts in each geographic area proportionally to the size of the population and/or the number of leprosy patients.
4. For each district selected, prepare a list of health facilities, including the number of registered patients.
5. Randomly select 3 health facilities proportionally to their number of leprosy patients in order to get the appropriate sample size

*Example:* In country X, the population is distributed as follows:

Northern Region			Southern Region		
District	Population	Cumulative Population	District	Population	Cumulative Population
A	100,000	100,000	F	600,000	600,000
B	500,000	600,000	G	200,000	800,000
C	200,000	800,000	H	150,000	950,000
D	50,000	850,000	I	200,000	1,150,000
E	250,000	1,100,000	J	150,000	1,300,000
			K	50,000	1,350,000
			L	450,000	1,800,000
Sampling interval	$1,100,000/2 = 550,000$	B and E are selected	Sampling interval	$1,800,000/2 = 900,000$	H and L are selected

Sampling interval is 550,000. From the third column of the table, the closest number to 550,000 and  $550,000 \times 2 = 1,100,000$  is 600,000 and 1,100,000 respectively, and therefore B and E are selected.

In the selected districts, the list of health facilities and the number of registered patients are as follows:

Districts B and E			Districts H and L		
Health centres	Patients	Cumulative Number	Health centres	Patients	Cumulative Number
1	70	70	7	210	210
2	20	90	8	50	260
3	120	210	9	120	380
4	780	990	10	1,250	1,630
5	450	1,440	11	30	1,660
6	60	1,500	12	310	1,970
			13	70	2,040
			14	120	2,160
			15	560	2,720
Sampling interval	$1,500/3 = 500$	4, 5 and 6 are selected	Sampling interval	$2,720/3 = 907$	10, 12 and 15 are selected

Sampling interval is 500. In the third column, the closest to 500, 1,000 and 1 500 are 990, 1,440 and 1,500, respectively. Therefore 4, 5 and 6 are selected.

Biases should be minimal considering that leprosy activities are consistent between health workers, that differences between health facilities cannot be taken into account, that the aim of the study is to give proxy indicators on national performance and that the study should be conducted in a short period of time. If more accurate and reliable information has to be obtained in a particular area or from health facilities, national programme managers should organise supervisory visits or in-depth evaluations.

## ***Planning and Carrying Out the Study***

Organising such a study in the field is a complex process which will require technical and administrative planning. This has to be done in close collaboration with authorities at all levels, especially those at the national and sub-national levels, WHO and, wherever necessary, NGOs. This section will outline the most important steps in organising a study and will highlight steps that must be standardised. It will also indicate requirements and resources needed for implementing the study.

## Planning the Monitoring

1. The study should be initiated by national programme managers and be part of their national plan of action. WHO will be responsible for introducing the concept to leprosy programme managers.
2. The objectives of the study and information to be collected will be discussed with national authorities.
3. The outline of the study will be the responsibility of WHO, in collaboration with national programme managers, WHO national consultants and Regional Advisors.

## Selecting Areas to Be Visited

This very important step could be organised in two different ways:

- X For countries where sufficient information is already available, selection of districts and health facilities can be made by WHO and proposed to the national authorities for approval.
- X For other countries, monitors will have to make the selection after collecting all relevant information at the central level.

In any case, national programme managers and monitors will have to organise details of the study, including the plan of work and time-table.

## Requirements

1. Personnel: Indicators and methods indicated in this document have been designed to minimise the workload. It is assumed that monitors can carry out most of the tasks involved in the process with the assistance and collaboration of health managers and health workers from the area being studied.
2. Transport and logistics: Such a study implies that monitors will have to travel to various places from the central level to the most peripheral health centres. Appropriate support should be provided by the national authorities and/or WHO.
3. All the necessary forms for data collection will be provided by WHO.

## Preparations of Field Visits

Before starting field visits, organisers should ensure that:

- X The objectives of the study and the list of data to be collected are clearly defined and accepted;
- X The sample sites to be visited have been selected and all concerned authorities and health facilities are informed and will be available;
- X The plan of work and time schedule for the study is defined;
- X Required resources and logistics are available.

### **Data Collection in the Field**

- X Attitude: monitors should involve local health workers in the process after having explained objectives of the exercise and the procedures to be followed. The attitude of monitors will be very important and they should clearly express that they are not supervisors or inspectors. Monitors should always give positive comments, even if they are facing difficulties in obtaining information they need to collect.
- X Monitors will list all available leprosy documents with local workers and compile them for collecting relevant information. At each step, monitors should explain what they are doing and for what purpose.
- X Whenever necessary, monitors will select a sample of leprosy patients to be visited, in consultation with local workers.
- X At the end of the visit, monitors will prepare a descriptive summary form, describing the key indicators as calculated in the selected health facilities. Feedback will be given to local workers during a debriefing meeting. At this stage, neither conclusion nor recommendations should be given. Results will be circulated and participants will be asked for comments. Monitors will highlight the positive aspects and ask how the situation can be improved when discussing the weak points.

### **Analysis and Reporting**

Analysis and reporting will be done at the health facility and at a higher level of administration. Final reports, including summary tables and graphics, will be discussed and finalised with the national programme manager. Information collected in the field will be consolidated with information available at the central level.