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A Guide for Independent Monitoring of Mass Drug Administration for Neglected Tropical Disease Control

A case study from Sierra Leone

Helen Keller International

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1.0 - Introduction

In public health initiatives that involve mass scale implementation, monitoring of the process and validation of the results or output are important quality control measures. For neglected tropical diseases (NTDs) such as lymphatic filariasis (LF), onchocerciasis, schistosomiasis (SCH), soil-transmitted helminthes (STH), and trachoma, the World Health Organization (WHO) recommends that national programs institute a validation mechanism following mass drug distribution (MDA) as quality control for data collection. Post-MDA validation of coverage is recommended early on in the program's trajectory, so that important lessons can be applied to subsequent years of implementation.^[1, 2] In addition to the NTDs,^[3-5] programs covering expanded immunization, malaria, measles, polio, and yellow fever, have found the implementation of post-event coverage surveys as a quality control mechanism to be vital in monitoring and evaluating program progress.^[6-11]

As a country that had historically focused on onchocerciasis control, Sierra Leone began scaling-up MDA for the NTDs in 2007 to include LF, STH, and schistosomiasis.^[12] In 2009 a post-MDA coverage survey was conducted in 13 health districts to validate the reported coverage for LF, onchocerciasis, and STH and collect sex- and age-specific data as well as reasons for not taking the drugs (Kamara et al, unpublished data). Although the importance of implementing a validation mechanism was well recognized, the survey process brought forth a number of challenges, including high cost, sampling based on an outdated, projected post-war population census, heavy burden on national program staff, and delayed results.

In 2010, before the LF MDA campaign began in the Urban Western Area (Freetown) and Rural Western Area health districts, an independent monitoring strategy (IM) – modeled after the strategy used by the WHO during polio vaccination campaigns - was adopted. The IM strategy allowed coverage during the MDA campaign to be monitored and reported on a daily basis, and drug coverage estimates to be reported immediately after the campaign had ended.^[13, 14] Since its inaugural implementation for the LF MDA in 2010, IM has been successfully incorporated into integrated NTD campaigns (i.e. schistosomiasis and STH, and LF, onchocerciasis, and STH) in rural districts in Sierra Leone. The approach has also been used by the NTD programs in other countries that are supported by HKI, such as Guinea and Niger.

This guide for implementing the IM strategy is based on the work that has been done through the National Neglected Tropical Disease Control Program in Sierra Leone. As countries move to elimination, ensuring appropriate monitoring to ensure accurate data on coverage is critical for achieving our goals. The approach described here is intended to serve as a tool for other countries to use and adapt to suit their specific needs.

2.0 - Overview of Independent Monitoring

Independent monitoring of drug coverage for NTD control consists of two phases: in-process monitoring and end-process monitoring. Both in- and end-process monitoring phases are used to collect data on the number of people in households and the general community who have taken specific drug packages during the NTD campaign. Data are collected from a sample of eligible household and community members using the same questionnaire for both in- and end-process monitoring. The estimated program coverage (# of eligible people treated/# of eligible people interviewed) derived through independent monitoring at the end of MDA campaign can be used to make comparisons to the reported coverage, both by district and at the national level, serving as a valuable monitoring and evaluation tool.

In-process monitoring is conducted during the MDA campaign. It serves as a monitoring tool to immediately troubleshoot problems, such as low coverage, drug stock out, shortage of other supplies, and community compliance and perceptions to participate in the MDA. Issues identified through IM are immediately brought to the attention of the National NTD Control Program and their sub-district/district-level/regional-level Ministry of Health counterparts who are in the field managing and monitoring the campaign. After each day of in-process monitoring, debriefing sessions are held with Ministry of Health staff overseeing MDA in the areas monitored. In-process monitoring does not commence until the MDA has had a sufficient amount of time to achieve its targets. The timing of in-process monitoring activities depends on the number of days the MDA is planned for, but generally it starts half way or two thirds through the MDA.

End-process monitoring is conducted immediately at the end of the MDA campaign to independently estimate post-MDA program coverage. After end-process monitoring has been completed, a debriefing session is held with all of the independent monitors and staff of the national program to discuss program coverage, lessons learned, and improvements that can be made for the next MDA. If it is found during end-process monitoring that certain areas were not reached by the MDA, it can elicit a “mop-up” campaign.

3.0 - Independent Monitors

The independent monitors should be persons that are “independent” of the national program (ie, not directly affiliated with/employed by the National NTD Control Program or the MDA campaign). This is important because IM serves as a mechanism to objectively monitor the campaign. The independent monitors work closely with the national program staff – who are busy supervising the program in the field – during independent monitoring by immediately relaying all findings.

The independent monitors should have experience in public health and conducting field work for public health initiatives. They can be recruited from other national organizations (such as Pharmacy Board, Statistics Bureau etc.), non-governmental organizations, and universities. They should have the language skills needed to conduct surveys with the various linguistic groups represented in the target areas. Independent monitors should be clearly identified by a badge/shirt and have authority to operate in a district from the Ministry of Health. They should introduce themselves to the district authorities and NTD focal point person and exchange contact details before their work commences.

The number of independent monitors needed is dependent upon the number of sites that are to be assessed each day (refer to Section 4.1 for calculation). If there are 20 sites selected for independent monitoring each day, and it takes one full day of work to cover each site (ie, the sites are far apart from each other), then 20 independent monitors would be ideal. Alternatively, if there are 30 sites chosen for each day and some of them happen to be very close to each other, then some of the independent monitors could feasibly assess more than one site each day.

3.1 - Training of the Independent Monitors

Training of the independent monitors should be done at a central location immediately before the monitoring begins. Training should only last for a maximum of one day and should cover a detailed overview of the NTDs being treated in the current MDA, an overview of the IM methodology, serious adverse events, and a practical session. During the training, the independent monitors should be trained in frequently asked questions that they may encounter from community members. Since the independent monitors are seen by the communities as ambassadors of the national NTD control program, the training should therefore give them the knowledge they need to serve in this role. The details of training topics are as follows:

1. Overview of the targeted diseases/conditions
2. The targeted age group
3. Interventions implemented
4. Eligibility criteria
5. Frequently asked questions (Annex 1: FAQs)
6. Serious versus common adverse events and the action to be taken

7. Questionnaire(s) to be administered (Annex 2: Tally sheet)
8. Methodology for selection within a cluster
9. Mobile phone application, answering the prescribed questions, storing and sending data
10. Practical session

At the end of the training, a post-test can be issued to gauge the level of knowledge of the independent monitors and to determine which areas require further explanation (see example test question in Annex 3). Knowing that there is a post-test also helps trainees focus on the information they are given. Not all those trained should be deployed if they perform poorly on the post-test. After the training, the independent monitors should be supplied with all materials they will need while in the field: folders, funds for hiring transportation, tally sheets, pencils, and phone numbers of contacts for reporting drug shortage, low coverage, serious adverse events, and other issues. It is important to ensure that the monitors know exactly where the locations are that they will be working each day.

Supervisors of IM should also attend the training so that they are fully aware of the information provided to the independent monitors during the training.

4.0 - Sampling

The instructions below provide one way that the sampling for independent monitoring can be calculated and is based on global guidelines for the independent monitoring of polio supplementary immunization activities.^[15] In general, the number of sites (clusters) needed to be sampled nationally or by IU and the number of individuals needed to be interviewed will depend upon the expected coverage, the desired level of precision and whether statistically significant disaggregation by sex, age groups or IU is desired.

4.1 - Sampling steps

Step 1: Determine the target population per health district or sub-district area that will be covered for the MDA being monitored.

- *Example: 200,000 persons over the age of 5 years for LF MDA in District #1*

Step 2: Determine the sample size, the number of persons to be interviewed.

- *Example: 2,000 persons in District #1*

For the convenience of sample size calculation, Annexes 4-6 provide the pre-calculated sample sizes according to the number of clusters and the precision levels, using a confidence interval of 95%. The selection of precision level in the tables (3%, 5%, or 10%) will largely depend on the funds available for monitoring as highest precision (3%) will require a largest number of clusters/individuals interviewed.

[Tables are reproduced from WHO 2005 (Ref #16)]

Step 3: Calculate the number of households that will need to be visited to achieve the sample. This will be half of the number calculated in Step 2 since half of the persons interviewed will be in households and the other half in the community.

- *Example: $2,000/2 = 1,000$ households in District #1*

In practice, the 30 x 30 rule works well: 30 randomly selected clusters (sites) with 30 randomly selected respondents per cluster. If a result disaggregated by sex is required, then 30 randomly selected males plus 30 randomly selected females per cluster should be selected. If a result disaggregated by IU is required, 30 randomly selected sites per IU should be selected. If disaggregated by community versus households, 30 interviews should be collected in each category.

Step 4: Determine the number of households one independent monitor can visit per day.

- *Example: 60 households (based on experience in Sierra Leone)*

Step 5: Calculate the number of days needed to visit all of the households by dividing the result of step 3 by step 4.

- *Example: 1,000 households/60 households per day = 16.7 days (17 days)*

Step 6: Determine the total number of days allocated for IM (sum of days for in- and end-process monitoring).

- *Example: 3 days of in-process monitoring + 2 days for end-process monitoring = 5 days*

Step 7: Calculate the number of independent monitors required to monitor District #1 by dividing the result of step 5 by step 6.

- *Example: 17 days/5 days = 3.4 (4) monitors*

Based on this example calculation, 4 monitors would be needed to reach 60 persons through household interviews and 60 persons through community interviews each day, for a total of five days of IM in district #1. The same sample calculation process can be used for IM at the sub-district level.

4.2 - Sampling of sites for in-process monitoring

Purposive sampling is employed for in-process monitoring focusing on areas that historically have low coverage, recent demographic changes such as urbanization and displaced populations, and that are hard to reach. However, it is also important to ensure that monitoring covers a wide geographic spread.

4.3 - Sampling of sites for end-process monitoring

Sampling mechanisms to reduce selection bias, such as cluster random sampling using probability proportionate to size (PPS) sampling, can be used for end-process monitoring since this is the phase of IM that will estimate program coverage. All sites (clusters) in a health district are listed along with their population, the cumulative population is calculated, and then the requisite sites are chosen using a pre-determined sampling interval. The accurate population size is often difficult to have especially in rapidly urbanizing settings or where population migrations have occurred due to nomadic groups, conflict, drought or disease. In many countries, the pre-MDA census taken by the community drug distributors (CDDs) before MDA or recent figures from another health campaign will give the most accurate data for independent monitoring. If these data are not available, national census projections can be used.

5.0 - Interviews

Both in- and end-process monitoring use household and community interviews to collect data on coverage. For each site, the number of persons to be interviewed during household and community surveys will be predetermined (see section on Sampling). Using past experience, at least 60 persons interviewed (30 males, 30 females) through household interviews and at least 60 persons interviewed (30 males, 30 females) through community interviews has been feasible per site; however, this number could be made greater or less depending on the circumstances in each country.

5.1 - Household interviews

A minimum of number of households (see section 4.0 - Sampling) should be interviewed in each site. A household is defined as a group of people that live and eat together.^[16]

Generally, in rural areas, independent monitors reach their site/locality, look for the center and spin a pen to find a route/road. Once a road has been identified, they count the number of houses on both side of the road from the center where the pen was spun. A random number table is then used to select the first household to begin. After interviewing the first household, the second one is the house on the left and so on. Efforts should be made to avoid interviewing houses very close to the health center. It is suggested that monitors walk at least 10 minutes away from the nearest health center in urban areas and at least 5 minutes away from the nearest health center in more rural areas before they begin. In urban settings, a similar approach is used to select households. Monitors should continue to interview households from the left and when they reach a cross road, they should turn left and interview households on the left until the required number is obtained. Interviewing less mobile people who live on the fringes of a health center's catchment area, will help assess coverage among the "Hard to Reach" population.

Permission to enter the household is first sought in a culturally acceptable manner. Upon entry to the household, the independent monitor should briefly explain the purpose of their visit. They then identify all persons living in the household who are eligible to participate in the MDA being assessed, as exclusion criteria for MDA varies depending on drug packages administered. The IM then distributes cards numbered from 1 onwards to the eligible individuals and asks someone without a card to pick a number randomly from the numbers for the household (this could be a child under the age of 5, for example). The person with the number selected is the person interviewed. Only that single individual is interviewed and only the response from that single individual is recorded on the tally sheet. If a young child's number is chosen, the independent monitor should interview the child's caregivers to ensure that accurate information is collected. Alternatively, exclude all those not eligible to take the drug and interview the rest of the member of the household. This however depends on the sample size.

5.2 - Community interviews

A separate community interviews should be conducted and a minimum of number of community members (see section 4.0 - Sampling) should be interviewed in each site. While walking from one household to the next, the independent monitor is bound to run into individual community members who are not living in the households s/he is visiting. This gives the independent monitor a chance to interview these persons. Additionally, in sites that are more urban, the monitor can interview persons located in community locations such as markets, places of worship, businesses, bus stops, street water pumps, university campuses, sports clubs, internet cafes, etc. In more rural communities the monitors can interview people at the community court house, community football field, water wells, farm, etc. these interviews should be recorded on separate tally sheets from the household interviews.

5.3 - Independent monitoring materials

Tally sheet and MDA image

The same tally sheet is used for both in- and end-process monitoring (Annex 2), and each independent monitor is given one tally sheet per day. The tally sheet consists of columns for persons interviewed and persons who recall taking the drug separated by community/household and sex. When an independent monitor interviews a male in a household, s/he marks a line over a number in the column “persons interviewed” in the household male section – if this same person recalls taking the drug(s), a line is marked over a number in the column “recall taking drug(s)” (in the household male section) and if not, no number is marked in this column. The independent monitor begins with number 1 in each column and continues in sequential order until the interviews are complete. A laminated card depicting simple MDA images and the drugs (Annex 7) is used in the field to help remind persons being interviewed of the MDA campaign specifics (community drug distributors, dose poles, the shape, size, and color of the drugs distributed, etc).

In instances where multiple drug packages are administered within the same time period, IM can be timed so it coincides with the distribution of each. For example, during the distribution of ivermectin and albendazole in a health district, monitors can conduct in-process IM in certain sites, and can do the same during praziquantel distribution, and again during the distribution of azithromycin and tetracycline. The end-process IM in this health district could then include questions about all three drug packages, which would be considered integrated IM. Or, if coverage with praziquantel has historically been very low in this health district, then IM could only focus on praziquantel.

Questionnaires

When more data on the quality of the service/training provided during preparation of MDA is required a more detailed questionnaire should be created and tested before training-day. Only collect essential data with minimum number of questions as long questionnaires will prolong and complicate the field-work, analysis and reporting. Such data include those that directly affect

decision making, course corrections or impact assessments and potential responses should be simple and unambiguous.

It is important to understand the level of awareness generated by the program amongst leaders and opinion-makers at all levels as these will greatly influence coverage. If insufficient awareness is generated and identified early this should be adjusted swiftly by a rapid media campaign.

It is not unusual for health workers/volunteers to attend training that may increase their knowledge but may not influence their attitude or practices leading to low coverage. It is not infrequent that knowledge gained in the classroom becomes distorted when repeated during cascade training on such large scales as required for a national MDA. The further down the cascade the more classroom knowledge will be influenced by traditional beliefs and practices. Being able to ascertain whether training has been effective will guide the following round of activities and help revise the frequently asked questions to make them more relevant to the public's needs.

Short questionnaire to be administered to community leaders, health workers and volunteers whilst IMs are in the field is a cost-effective way of evaluating the effectiveness of these MDA preparations.

5.4 - Data entry and analysis

For efficient data reporting, mobile phone applications, such as EpiSurveyor, Magpie, CommCare, Formhub and ONA platforms, can be used. Data on the number of persons interviewed and their recall on having taken the drug package(s) are summarized and submitted at the end of each day via mobile phone applications or a phone call to the IM coordinator at the central location.

For reporting summary data on mobile phone applications, the following questions may be included:

- How many males did you interview in the community today?
- How many males interviewed in the community recall taking the respective drugs (such as azithromycin or ivermectin and albendazole)?
- How many females did you interview in the community today?
- How many females interviewed in the community recall taking the respective drugs (such as azithromycin or ivermectin and albendazole)?
- How many males did you interview in their households today?
- How many males interviewed in the households recall taking the respective drugs (such as azithromycin or ivermectin and albendazole)?
- How many females did you interview in their households today?
- How many females interviewed in the households recall taking the respective drugs (such as azithromycin or ivermectin and albendazole)?

The IM coordinator downloads or enters the data into an excel spreadsheet on the daily basis. The coverage (percentage proportion of number of persons recalling taking the drugs among the number of persons interviewed) is calculated for each day of monitoring. Data for both in- and end-process monitoring can be stratified by type of interview (household vs. community) and by sex. Daily debriefings with the relevant focal points at the end of each day of in-process IM are required and it is here where coverage rates and issues in the field can be presented and discussed. The national program manager(s) should be present at the final end-process debriefing.

5.5 - Monitoring of the independent monitors

If human resources allow, a supervision and monitoring of the independent monitors can be established to ensure that monitors are in their assigned locations and are correctly following protocol. A simple checklist can be created to document specific items that should be adhered to in the field. Findings can be presented during the daily debriefings to discuss general issues detected in the field.

6.0 - Follow-Up Actions

During and after IM, results should be discussed among pertinent regional/district/health center staff. Several follow-up actions for the national program can be recommended based on the results of independent monitoring:

- ▶ Low coverage - threshold defining low coverage is dependent on the country and should be aligned with WHO guidelines (i.e, <80% for LF, <80% for trachoma, <75% among school children for schistosomiasis/STH) [2, 17, 18]
 - In-process & end-process: Review supply chain management, correct deficits, motivate health workers and community drug distributors, visit low performing/missed sites, investigate further and augment MDA (i.e, organize a mop-up campaign)

Document why coverage was low/communities were missed, so that lessons can be learned and avoided during the next MDA. Additionally, heightened supervision of the distribution teams in these sites would be recommended during the next MDA.

- ▶ Drug shortage
 - In-process: If possible, reroute drugs from another part of the district, region, or country (if a surplus exists in another area) to the area where there is a shortage; communicate with the people living in these areas so that they clearly know when and where drugs will be available

Document how and why the drug shortage came to fruition in these sites (i.e, inaccurate population data, poor drug management, high number of expired or lost tablets, etc.) so that these issues are not repeated in subsequent MDAs.

- ▶ Misconceptions circulating in the community about the MDA
 - In-process: Organize enhanced social mobilization efforts/counseling to dissuade circulating misconceptions
 - End-process: Organize enhanced social mobilization efforts/counseling to dissuade circulating misconceptions

Document what these misconceptions are, so that subsequent MDAs can address them through enhanced information, education, and communication materials and social mobilization strategies.

7.0 - Conclusions

Independent monitoring, due to its sampling design, is not a population-based coverage validation survey, therefore it should not be used to make population inferences. It is a low cost tool for countries to use that allows for real-time assessment of program progress, finding of weakness and bottleneck of MDA, and immediate remediation in areas that are under-performing, and provides a program coverage estimate that can be compared to the reported coverage.

Considering that each monitor has the potential to interact with a high number of people during each day of monitoring, in addition to gathering coverage data, monitors are faced with important opportunities that are vital to the success of NTD control.

First, IM gives monitors the opportunity to present information about the importance of the NTD campaign and answer any related questions that people may have. Many of the people interviewed may have heard “facts” about the NTDs and the MDA campaign on the radio or through posters, but will be curious to better understand their personal risk of contracting these NTDs or of having an adverse reaction after taking the drugs. Through personal counseling/communication, the independent monitors can provide answers to these frequently asked questions, dissuade fears or misconceptions, and affirm participation.

Secondly, depending on the drug(s) being distributed during the MDA, campaign participants could be experiencing adverse events ranging from minor adverse events to the rarer, serious adverse events. IM gives monitors the opportunity to identify and document adverse events and immediately present this information to the national program. If necessary, the monitor can refer persons experiencing adverse events to the nearest health facility, therefore it is important that the monitor has necessary contact information on-hand in the case that urgent care is required.

Thirdly, during both in- and end-process IM, a monitor may encounter a community that has not received the drugs or that has very low coverage. In the first day or two of in-process monitoring this is not terribly concerning; however, it should still be reported to the national program. Near the end of the campaign or after the campaign has ended, the monitor can relay this critical information to the national program so that missed or low-coverage communities are treated.

During both in- and end-process IM, the monitors are encouraged to find both community drug distributors and health facility staff to ensure that they have all of the materials they need, such as adequate drug stock, registers, and dose poles and immediately report any shortages or gaps to the national program.

Finally, in countries where the national census population data may not accurately reflect the true population distribution, program coverage calculations using these figures as a denominator could be distorted. Independent monitoring provides a program coverage which

can be compared with calculations using other denominators (national census projections, CDD census) to determine the best denominator to use to calculate program coverage.

8.0 - Independent Monitoring for the urban LF MDA in Sierra Leone: A Case Study

In September 2011, IM was implemented for the urban LF MDA in two health districts of Sierra Leone: Urban Western Area (Freetown) and Rural Western Area. The focus of the independent monitoring was on the hard-to-reach populations, therefore one day of in-process and one day of end-process monitoring were completely devoted to hard-to-reach sites such as the slums, hill tops and shanty towns. Twenty independent monitors were trained by staff from Helen Keller International (HKI) in Freetown over the course of one day, and began their IM work the following day. The independent monitors were provided copies of the tally sheet (Annex 2), an MDA image (Annex 6), and frequently asked questions sheet (Annex 1). They interviewed at least 30 males and 30 females in households and at least 30 males and 30 females in the community at each site. Three days of in-process monitoring during the campaign and two days of end-process monitoring after the campaign were completed. Data were entered into Excel databases and shared with the national program.

Debriefing sessions were held after each day of in-process monitoring with the District Health Management Team for the Western Area, national program staff, the 20 independent monitors, and HKI staff. During these sessions, each monitor gave an overview of the areas s/he visited that day, and highlights issues discovered in coverage, drug stock, adverse events, minor side effects, refusals, and misconceptions, among others. Some of the most notable issues that were discussed during the debriefing sessions were drug shortages, minor side effects (headaches, localized swelling, itching, dizziness, and vomiting), fears related to reproductive health, and water not being supplied by the drug distributors during MDA. Monitoring of the monitors took place during the IM of the urban LF MDA using a standardized checklist and both positive and negative findings were presented to all of the monitors after the debriefing sessions each evening.

Details of the IM for the urban LF MDA are described in the previous publication^[13]. Below are the summary tables of the results from the reported data (Table 1) and the IM (Table 2).

Table 1 Reported ivermectin and albendazole treatments by area, day and cumulative coverage (%) by projected eligible population (National Populations Census 2004)

Area	Projected Pop	Projected Eligible Pop	Day 1		Day 2		Day 3		Day 4		Day 5		Day 1-5
			Treated	%	Treated	%	Treated	%	Treated	%	Treated	%	Treated
UWA	945,501	740,327	341,194	46	253,401	80	134,555	98	64,896	107	66,978	116	861,024
RWA	241,959	188,454	86,653	46	63,836	80	40,521	101	27,047	116	25,326	129	243,383
Total	1,187,460	928,781	427,847	46	317,237	80	175,076	99	91,943	109	92,304	119	1,104,407

Table 2 Number of persons interviewed by Household or by Location and recalling taking both ivermectin and albendazole by area, day and compliance (%) for Day 1 and Day 2 End Process

	Sample size as % of treatments	Sample size as % of eligible pop	Day 1: End Process			Day 2 End Process: Hard to Reach			Total Day 1 & 2: End Process		
			Interview	Recall	%	Interview	Recall	%	Interview	Recall	%
UWA											
Household			460	371	80.7	530	418	78.9	990	789	79.7
Location			2734	2332	85.3	2613	2275	87.1	5347	4607	86.2
Subtotal	0.74%	0.86%	3194	2703	84.6	3143	2693	85.7	6337	5396	85.2
RWA											
Household			267	236	88.4	281	244	86.8	548	480	87.6
Location			1056	907	85.9	1308	1150	87.9	2364	2057	87.0
Subtotal	1.20%	1.55%	1323	1143	86.4	1589	1394	87.7	2912	2537	87.1
Total	0.84%	1.00%	4517	3846	85.1	4732	4087	86.4	9249	7933	85.8

Budget components in Sierra Leone included:

- Per diem for independent monitors (training, independent monitoring, final debriefing)
- Per diem for District Health Management Team staff to attend the daily debriefings
- Fuel for District Health Management Team staff
- Transport funds for independent monitors
- Phone top-up cards for independent monitors
- Tee shirts for independent monitors
- IM materials (pencils, paper, folder, MDA image)
- Refreshments (training day, daily debriefings, final debriefing day)

Including costs for implementing IM in Sierra Leone in both urban and rural health districts, the average cost is about \$5,500 per round of IM with an average of \$2,700 per health district (\$1,400 lower bound, \$3,800 upper bound). The cost will depend upon the size of the district, location, terrain, etc.

9.0 Annexes

Annex 1: Frequently asked questions for LF MDA developed in Sierra Leone (abridged)

What is Lymphatic Filariasis (LF)?

- Swelling known as “elephantiasis”, “bigfut”, “

How is LF transmitted?

- From person to person by the bite of an *Anopheles* mosquito
- Transmission usually starts in childhood, often before age five
- Progression to disease is very slow about 10-20 years



What are the signs of LF?

- Swelling slowly begins, most commonly of the feet or scrotum
- Sometimes breast or arms become swollen
- Sometimes the urine appears thick and cloudy
- In long-lasting infection, a leg may become suddenly swollen, painful and cause fever
- The episodes of limb pain and fever may occur every few months in some people

Do all people with swollen legs or scrotums have LF?

- No, there are other causes especially in the elderly

Some people in Sierra Leone believe witchcraft or cockroaches cause elephantiasis (LF)?

- “Elephantiasis” “Bigfut” is not caused by witchcraft, juju, cockroaches or “korkor” (owl)
- “Elephantiasis” “Bigfut” is caused by a worrum transmitted by the bite of a mosquito

How do we prevent LF in SL?

- The WHO have recommended annual treatment with 2 drugs: Mectizan and Albendazole
- Treatment began in the Northern and Eastern Provinces: 2007 and in the South in 2008
- The first preventive treatment was provided for the Western Area in 2010
- The next preventive treatment for the Western Area 2012 will be 13th -17th September 2012

Can we eliminate LF in SL?

- Yes, annual treatment of the population over the age of 5 years could eliminate LF
- This elimination program started in 2007 and was scaled up to full national coverage in 2010

When will Ministry of Health start the Bigfut campaign in the Western Area this year?

- The campaign starts on the 13th of September and will last for 5 days
- During these 5 days all persons over the age of 5 years in the will be offered treatment

Where can I get treated?

- Health workers will be at prominent sites around the: Slums, Health Centers, bus stops, water pumps, fuel stations, office compounds, schools, markets, sports centers
- Health workers will also move around their communities, house to house
- Health workers will be wearing the blue, white and green aprons,
- Health workers will ask you to drink the pills whilst they watch: Directly Observed Treatment

Who should receive LF drug?

- Everyone over the age of five years
- Those most at risk of LF have had the most mosquito bites during their lifetime

Who should not receive LF drug?

- Severely ill, weak or very elderly persons
- Pregnant women and women who have delivered less than 2 weeks ago
- Children under 5 years or under the minimum height on the “dose pole”

Is the big fut drug safe?

- The drug for LF treatment is very safe and given to many countries in the world.

What if a woman is pregnant or someone is unwell during the distribution but wants to take the treatment after the campaign?

- Some tablets will be kept at the Health Center for 2 weeks for these people
- After this time, a person must wait until the next year



What if a child is 5 years old but not tall enough to reach the first mark on the pole?

- Children not up to the first mark on the pole will not be treated even if they are 5 years old

Are there any side effects following treatment?

- After taking Mectizan some people experience headache, itching or swelling
- This normally disappears within 3 days without further treatment.
- Severe itching. swelling lasting more than 3 days may be treated at health center with piriton
- Someone who had a reaction previously they may still be given the treatment this year and can expect less itching/ swelling as there will be fewer “worrums” in their body

How can community leaders and others help towards a successful campaign?

- The MOH&S is asking everyone to participate and take Mectizan and albendazole tablets.
- Leaders, family heads, please tell your communities, family members, night watchmen, gardeners, house staff, nannies, drivers, fishermen to come for treatment
- Provide water for drinking these tablets when the health workers are in your communities

Annex 2: Tally Sheet: LF MDA: in- or End-Process

DATE:

AGENCY:
MONITORM:

DISTRICT:
SIGNATURE:

	Location	Persons interviewed	Total	Recall taking IVM and ALB	Total
Community	Males	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 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50		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 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	
	Females	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 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50		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 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	
Households	Males	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 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50		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 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	
	Females	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 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50		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 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50	
Total	Males				
	Females				

Annex 3: Independent Monitoring Training Evaluation Form

NAME:

.....

INSTITUTION:

.....

Please indicate your impressions of the items listed below.

No.	Evaluation Category	Strongly Agree	Agree	Disagree	Strongly Disagree
1.	The training met my expectations	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.	I will be able to apply the knowledge gained	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.	The training objectives for each topic were identified and followed	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.	The content was organized and easy to follow	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5.	The materials distributed were pertinent, user-friendly and useful	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6.	The trainers were knowledgeable	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7.	The quality of instruction was good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8.	The trainer met the training objectives	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9.	Class participation and interaction were encouraged	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10.	Adequate time was provided for questions and discussions	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11.	Adequate time was provided for role plays and field practice	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

12.	Survey methodology was clear and well understood	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13.	Training timing was ideal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14.	Training space was ideal	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15.	Refreshment/food provided was good	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

16. How do you rate the training overall?

Excellent Good Average Poor Very poor

17. What aspects of the training should be improved?

18. What aspects of the training did you find useful?

19. What aspects of the training were covered to a great extent?

20. What recommendations would you suggest for future trainings?

Annex 4: No of persons to be interviewed per cluster if desired precision is $\pm 3\%$ [16]

Desired precision $\pm 3\%$	Expected coverage										
	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	
Number of clusters	20	107	106	103	98	90	81	69	55	39	21
	21	102	101	98	93	86	77	66	52	37	20
	22	98	97	94	89	82	73	63	50	35	19
	23	93	92	90	85	78	70	60	48	34	18
	24	89	89	86	81	75	67	57	46	33	17
	25	86	85	82	78	72	65	55	44	31	17
	26	83	82	79	75	69	62	53	42	30	16
	27	80	79	76	72	67	60	51	41	29	16
	28	77	76	74	70	65	58	49	39	28	15
	29	74	73	71	68	62	56	48	38	27	14
	30	72	71	69	65	60	54	46	37	26	14
	31	69	69	67	63	58	52	45	36	25	14
	32	67	67	65	61	57	51	43	35	25	13
	33	65	65	63	59	55	49	42	34	24	13
	34	63	63	61	58	53	48	41	33	23	12
	35	62	61	59	56	52	46	40	32	22	12
	36	60	59	57	54	50	45	38	31	22	12
	37	58	58	56	53	49	44	37	30	21	11
	38	57	56	54	52	48	43	36	29	21	11
	39	55	55	53	50	46	42	36	28	20	11
	40	54	53	52	49	45	41	35	28	20	11
	41	53	52	50	48	44	40	34	27	19	10
	42	51	51	49	47	43	39	33	26	19	10
	43	50	50	48	46	42	38	32	26	18	10
	44	49	49	47	45	41	37	32	25	18	10
	45	48	47	46	44	40	36	31	25	18	10
	46	47	46	45	43	39	35	30	24	17	9
	47	46	45	44	42	39	35	30	24	17	9
	48	45	45	43	41	38	34	29	23	17	9
	49	44	44	42	40	37	33	28	23	16	9
	50	43	43	41	39	36	33	28	22	16	9
	51	42	42	41	39	36	32	27	22	16	8
	52	42	41	40	38	35	31	27	21	15	8
	53	41	40	39	37	34	31	26	21	15	8
	54	40	40	38	36	34	30	26	21	15	8
	55	39	39	38	36	33	30	25	20	14	8
	56	39	38	37	35	33	29	25	20	14	8
	57	38	38	36	35	32	29	24	20	14	8
	58	37	37	36	34	31	28	24	19	14	7
	59	37	36	35	33	31	28	24	19	14	7
	60	36	36	35	33	30	27	23	19	13	7
	61	36	35	34	32	30	27	23	18	13	7
	62	35	35	34	32	29	26	23	18	13	7
	63	34	34	33	31	29	26	22	18	13	7
	64	34	34	33	31	29	26	22	18	13	7
	65	33	33	32	30	28	25	22	17	12	7
	66	33	33	32	30	28	25	21	17	12	7
	67	32	32	31	30	27	24	21	17	12	7
	68	32	32	31	29	27	24	21	17	12	7
	69	31	31	30	29	26	24	20	16	12	7
	70	31	31	30	28	26	23	20	16	11	7

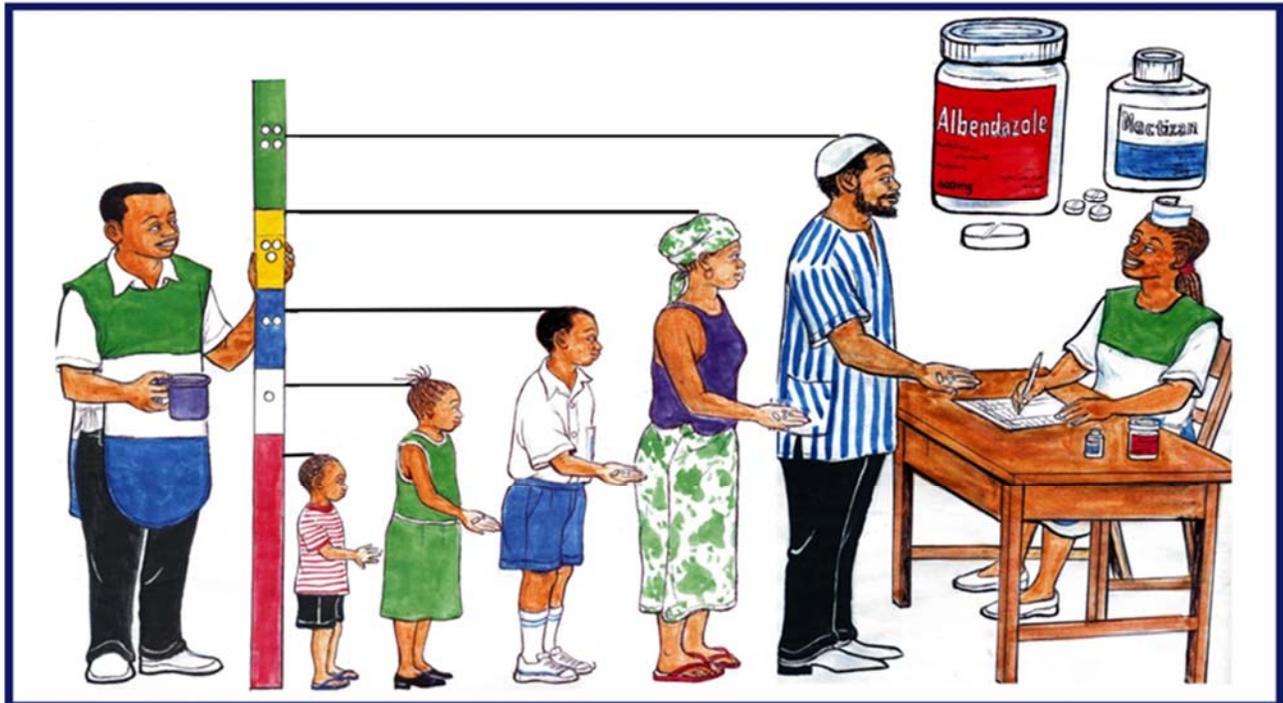
Annex 5: No of persons to be interviewed per cluster if desired precision is $\pm 5\%$ ^[16]

Desired precision $\pm 5\%$	Expected coverage										
	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	
Number of clusters	20	39	39	37	35	33	29	25	20	14	8
	21	37	37	36	34	31	28	24	19	14	7
	22	35	35	34	32	30	27	23	18	13	7
	23	34	34	33	31	29	26	22	18	13	7
	24	33	32	31	30	27	25	21	17	12	7
	25	31	31	30	28	26	24	20	16	12	7
	26	30	30	29	27	25	23	19	16	11	7
	27	29	29	28	26	24	22	19	15	11	7
	28	28	28	27	25	24	21	18	14	10	7
	29	27	27	26	25	23	20	17	14	10	7
	30	26	26	25	24	22	20	17	14	10	7
	31	25	25	24	23	21	19	16	13	9	7
	32	25	24	24	22	21	19	16	13	9	7
	33	24	24	23	22	20	18	15	12	9	7
	34	23	23	22	21	19	17	15	12	9	7
	35	22	22	22	20	19	17	15	12	8	7
	36	22	22	21	20	18	17	14	11	8	7
	37	21	21	20	19	18	16	14	11	8	7
	38	21	21	20	19	17	16	13	11	8	7
	39	20	20	19	18	17	15	13	11	8	7
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	41	19	19	18	18	16	15	12	10	7	7
	42	19	19	18	17	16	14	12	10	7	7
	43	18	18	18	17	16	14	12	10	7	7
	44	18	18	17	16	15	14	12	9	7	7
	45	18	17	17	16	15	13	11	9	7	7
	46	17	17	17	16	15	13	11	9	7	7
	47	17	17	16	15	14	13	11	9	7	7
	48	17	16	16	15	14	13	11	9	7	7
	49	16	16	16	15	14	12	11	8	7	7
	50	16	16	15	14	13	12	10	8	7	7
	51	16	15	15	14	13	12	10	8	7	7
	52	15	15	15	14	13	12	10	8	7	7
	53	15	15	14	14	13	11	10	8	7	7
	54	15	15	14	13	12	11	10	8	7	7
	55	14	14	14	13	12	11	9	8	7	7
	56	14	14	14	13	12	11	9	7	7	7
	57	14	14	13	13	12	11	9	7	7	7
	58	14	14	13	13	12	10	9	7	7	7
	59	14	13	13	12	11	10	9	7	7	7
	60	13	13	13	12	11	10	9	7	7	7
61	13	13	13	12	11	10	9	7	7	7	
62	13	13	12	12	11	10	8	7	7	7	
63	13	13	12	12	11	10	8	7	7	7	
64	13	12	12	11	11	10	8	7	7	7	
65	12	12	12	11	10	9	8	7	7	7	
66	12	12	12	11	10	9	8	7	7	7	
67	12	12	12	11	10	9	8	7	7	7	
68	12	12	11	11	10	9	8	7	7	7	
69	12	12	11	11	10	9	8	7	7	7	
70	11	11	11	10	10	9	8	7	7	7	

Annex 6: No of persons to be interviewed per cluster if desired precision $\pm 10\%$ [16]

Desired precision $\pm 10\%$	Expected coverage										
	50%	55%	60%	65%	70%	75%	80%	85%	90%	95%	
Number of clusters	20	10	10	10	9	9	8	7	7	7	7
	21	10	10	9	9	8	7	7	7	7	7
	22	9	9	9	8	8	7	7	7	7	7
	23	9	9	9	8	8	7	7	7	7	7
	24	9	8	8	8	7	7	7	7	7	7
	25	8	8	8	8	7	7	7	7	7	7
	26	8	8	8	7	7	7	7	7	7	7
	27	8	8	7	7	7	7	7	7	7	7
	28	7	7	7	7	7	7	7	7	7	7
	29	7	7	7	7	7	7	7	7	7	7
	30	7	7	7	7	7	7	7	7	7	7
	31	7	7	7	7	7	7	7	7	7	7
	32	7	7	7	7	7	7	7	7	7	7
	33	7	7	7	7	7	7	7	7	7	7
	34	7	7	7	7	7	7	7	7	7	7
	35	7	7	7	7	7	7	7	7	7	7
	36	7	7	7	7	7	7	7	7	7	7
	37	7	7	7	7	7	7	7	7	7	7
	38	7	7	7	7	7	7	7	7	7	7
	39	7	7	7	7	7	7	7	7	7	7
	40	7	7	7	7	7	7	7	7	7	7
	41	7	7	7	7	7	7	7	7	7	7
	42	7	7	7	7	7	7	7	7	7	7
	43	7	7	7	7	7	7	7	7	7	7
	44	7	7	7	7	7	7	7	7	7	7
	45	7	7	7	7	7	7	7	7	7	7
	46	7	7	7	7	7	7	7	7	7	7
	47	7	7	7	7	7	7	7	7	7	7
	48	7	7	7	7	7	7	7	7	7	7
	49	7	7	7	7	7	7	7	7	7	7
	50	7	7	7	7	7	7	7	7	7	7
	51	7	7	7	7	7	7	7	7	7	7
	52	7	7	7	7	7	7	7	7	7	7
	53	7	7	7	7	7	7	7	7	7	7
	54	7	7	7	7	7	7	7	7	7	7
	55	7	7	7	7	7	7	7	7	7	7
	56	7	7	7	7	7	7	7	7	7	7
	57	7	7	7	7	7	7	7	7	7	7
	58	7	7	7	7	7	7	7	7	7	7
	59	7	7	7	7	7	7	7	7	7	7
	60	7	7	7	7	7	7	7	7	7	7
61	7	7	7	7	7	7	7	7	7	7	
62	7	7	7	7	7	7	7	7	7	7	
63	7	7	7	7	7	7	7	7	7	7	
64	7	7	7	7	7	7	7	7	7	7	
65	7	7	7	7	7	7	7	7	7	7	
66	7	7	7	7	7	7	7	7	7	7	
67	7	7	7	7	7	7	7	7	7	7	
68	7	7	7	7	7	7	7	7	7	7	
69	7	7	7	7	7	7	7	7	7	7	
70	7	7	7	7	7	7	7	7	7	7	

Fri big fut en worrum meresin



Dis fri welbodi biznes, na fo hol am wit two an O!

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