

Coverage survey Malawi.

1. Introduction and objectives

Malawi has undertaken preventive chemotherapy treatment (PCT) for schistosomiasis and soil transmitted helminths (STH) using praziquantel and albendazole respectively. PCT was undertaken in 28 districts in 2012; in ten districts this was the first PCT round, 18 districts were also treated in the previous year. The intention of the campaign was to treat enrolled and non-enrolled school age children (SAC). Due to adverse reactions, including a fatality (later shown not to be associated with the PCT) and the media coverage which discouraged, SAC in communities were not treated, and funds are insufficient to resume a mop up in the current year.

In three districts adults as well as school age children have been treated as a pilot and coverage in both schools and community did take place. The intention is to undertake a coverage survey in two districts (Mulanje and Mangochi) with the objectives of:

- Validating reported district coverage in schools and communities;
- Assessing the coverage rates by gender;
- Assessing the coverage rates in enrolled and non enrolled school age children;
- Assessing coverage rates in adults;
- Understanding the differences in coverage between schools and communities with high and low coverage;
- Understand the reasons where those eligible did not receive or accept treatment
- To provide insights on strengths and weaknesses of the PCT which may have relevance to the wider programme as they change from school based to community wide treatment.

2. Study Approach

The district will be purposively selected. The principal objective is to validate coverage. Secondary objectives are to identify differences in demand and implementation between communities (including schools) with high and low coverage.

The study will have two components:

1. Random household survey of eligible enrolled and non-enrolled SAC and adults from 65 targeted communities to quantify up-take of treatment and the reasons for non-treatment.
2. Survey with health surveillance assistants (HSA), head teachers and community leader(s) in from the 65 communities selected to assess standard processes of implementation (methods of mobilisation, frequency of mobilisation, duration of PCT in school or community, other practices, knowledge of the MDA, duration of HSA service in specific village, involvement and support by local leaders)

a. Survey Design

The primary sampling unit will be the community; this encompasses the village and a local primary school. The proposed coverage survey design is stratified by community into two strata: those with average and above average reported coverage, and those with below average coverage.

Communities would be randomly selected from each strata in proportion to the number of units in each strata.

Ten households would be randomly selected per community based on the village register (or a corrected register). If this were unavailable or could not be developed selection would be based on a random walk / transect of the village. In the selected households and all eligible¹ members would be asked the questionnaire.

b. Sample size

The sample size is influenced mainly by the level of confidence, the precision around the central result and the design effect or rho (Intra-class correlation) which determines the design effect. The table below identifies sample size required to estimate the coverage rate \pm 5-10% points either side of a 50% result. The sample size selected will be determined by statistical and financial considerations.

Table 1: Sample sizes for the estimation of the coverage rate in SAC

% either side of a 50% result	5%	6%	7.5%	9%	10%
Rho*	0.336	0.336	0.336	0.336	0.336
SE	0.03	0.03	0.03	0.05	0.05
Numbers sampled:					
Villages	140	98	63	44	36
Individuals	2810	1957	1255	873	708
Assume 99% response rate, 10 h/h per village, and 2 SAC / H/H					
* design effect 7.38 (informed by Dhuly Chowdhury, JSM 2010)					

If Rho is .15, a sample size of 63 would be needed to be 95% confident with 6% points precision either side of a 50% result.

The sample will include 65 villages.

c. Logistics for Malawi survey

The number of survey teams and enumerators will be determined by the time available for the survey (a maximum of 20 days). If 10 households / village are selected and interviews take approximately 5 -6 hours (10 interviews of 1 ½ hours – including walking between h/h, also allowing

¹ Eligible members include all sac children and all adult females not in the first trimester of pregnancy during the PCT, and all adult males [need to confirm with FF / SJ] living in the house at the time of the PCT

1½ hours introduction to local authority and household selection). 4 enumerators and a supervisor would be required per team².

Scenario 1: If 3 villages can be undertaken every 2 days assuming the team completes a village and moves to the next one to undertake introduction and household selection, and returns next day to complete interviews. If 650 households are interviewed from 65 villages this is 163 days of interviews. A minimum of 3 teams are required to complete the work within 15-16 days (excluding travel to the district), assuming 5 hours / day are spent on the survey and allowing 1 hours for travel to the next village. 1 team will work 1 district – so travel distances should be less. (1 team 45 days, 2 teams 22 days excluding journey time to the district(s))

Scenario 2 if only 1 village is undertaken a day it would take 4 teams 16 days excluding travel to the district (3 days) and training (2 days).

² If the supervisor undertakes the questionnaires with the authorities this would mean 3 enumerators could be sufficient.

Annex 1

Example Household Survey Form – Complete one questionnaire per household

ICOSA Praziquantel Coverage Survey

District: | _____ | Health centre: | _____ | Village: | _____ |

Interviewer Code: |__|__|__| HH No: |__|__|__| Interview date : |__|__|/|__|__|/2012

Hello my name is < #####> We are asking you to take part in a survey to help us learn more about the drug distribution in this district. The Ministry of Health wants to know if you and your children were given deworming drugs and how you knew about the distribution. Your answers will help us to improve the programme in future years. If you and your children want to take part in the survey, you tell us and we will note your answer. You do not have to take part in the survey. You will not be in trouble if you say no.

Do you want to take part **YES** **NO**

Cont.

Example Household Survey Form – Complete one questionnaire per household

District: | _____ | Health centre: | _____ | Village: | _____ |

Interviewer Code: |__|__|__| HH No: |__|__|__| Date of interview (dd/ mm/2012): |__|__|/|__|__|/2012

Q	0	All people resident at time of MDA				PZQ		ALB		All people resident at time of MDA		
		1	2	3	4	5	6	7	8	9	10	11
Mem ber No.	Present at interview Y/N	Sex (M/F)	Age (Years)	6-15 years Are you attending school? (Y/N)	Present at distribution (Y/N)	Did you swallow the drugs (Y/N)	Reason if not taken*	Did you swallow the drugs (Y/N)	Reason if not taken*	Time from home to distribution point**	Where did you take these drugs? ***	How did you hear of MDA distribution? ****
1												
2												
3												
4												
5												
6												
7												
8												
9												
10												

Q12. Note in lines above gender and age of all members of the household residing in the house at the time of the MDA. How many were eligible for treatment taking into account the policy of the programme [_____]

They should be noted in the rows, along with information on their presence for interview today.

Code sheet:

Q0 Is the person listed as in the house during MDA present and able to give an interview?					
1. Yes 2. Refused to be interviewed 3. Not in the house at the time of survey 4. No longer staying here (left after the MDA) 5. Other reasons					
* Q6 and Q8 Reason:					
<i>If treatment was not received, indicate the reason:</i>					
1=Underage;	2=Pregnant;	3=Pregnant 1 st trimester	4=Breast feeding;	5=Too Sick;	
6a= Occupied/ in field	6b=away <5 days	6c= Away > 5 days	7= Not heard about program;	8=Drugs finished;	
9 = No drug distributor;	10=Is healthy;	11=Medicine does not work;	12=Fear of side-effects;	13=Rumors	
14=Too many tablets;	15=Bad smell / taste;	16=Too old	17=Other (specify)		
** Q9 Travel time (by foot) / Distance					
1. Near <30 minutes 2. Medium 30-60 minutes 3. Far – 1-2 hours 4. Very far > 2 hours 5. Don't know / will not say					
*** Q10 Where did you receive treatment?					
1. School 2. House 3. Clinic / health centre 4. Health post 5. Mobile site 6. Other central place (specify)					
**** Q11 How did you hear about the distribution?					
1. Health worker	2. Traditional healer	3. Political leader	4. Friend /family / neighbour	5. Village meeting	
6. School meeting	7. Church	8. Radio	9. TV 10. Poster	11. Banner	12. Leaflet
13. Don't know	14. Refuse to answer	15. Other (specify)			

Annex 2

Questionnaire for village leaders, health surveillance staff and teachers.**Consent Form**

This is a study to learn lessons of what worked well and what would be done differently in the next MDA. This district was one of 3 where adults as well as children were treated for worms and schistosomiasis the experiences will benefit implementation and planning in this district and other districts. On behalf of the Ministry of Health we would like to hear about your involvement in the MDA and your views on what activities went well and where changes could be made.

Are you willing to be interviewed

YES [] NO []

Signature: _____

Administrative information

District: | _____ | Health centre: | _____ | Village: | _____ |

Nearest Primary School: [_____]

Interviewer code: |__|__|__|

Interview date :|__|__|/|__|__|/2012

Inteviewee code: |__|__|__|

Dates of distribution the school:

Start Date: |__|__|/|__|__|/2012

End date :|__|__|/|__|__|/2012

Dates of distribution in the village:

Start Date: |__|__|/|__|__|/2012

End date :|__|__|/|__|__|/2012

Q1. Role of interviewee: _____

Code: 1 Village leader 2 Health Surveillance Assistant 3 Teacher /head teacher
4. Village Health Committee member 5. Other

Q2. How long have you been in this role in the village? _____ years

Q3. Were you involved in advocacy, promotion or other activities for the schistosomiasis and soil transmitted helminth (worm) drug administration **YES/NO**

If yes go to question 5 if no please answer question 4 and end the interview

Q4. Please can you suggest someone else who was involved in the campaign in this village and who we could speak with?

See if this person is available to interview. End interview and thank person

Q5. Did you receive any information about the drug distribution or were you invited to any meetings to inform you about the campaign or attend any training? **YES / NO**

If yes say

	1.Training session	2. Meeting	3. Informed only	4. Other
5A If yes what form did it take?				
5B Where was it held?				
5C Who organised it?				

Codes: **5B)** 1. In village 2. In School 3. Village health post 3. At health centre 4. Other

5C) 1. Village leader 2. School 3. Health surveillance staff 4. Village Health Committee
5. District health office 6. Other (specify)

Q6. Were **you** involved in promoting the campaign? **YES / NO**

If yes

A) Where and what form was the promotion?	B) How many times did you do this?	C) What information did you tell people	D) Who was the audience or listeners	How many people did you contact?

Codes:

6A) 1. Village meeting; 2. School meeting for parents & pupils; 3. School Assembly/ Class announcement; 4. Meeting in health post / centre; 5. Putting up posters; 6. Distributing a letter; 7. Acted as town crier; 8. Announcement in church & mosque; 9. Announcement during funeral

6C) 1. Time and place of MDA 2. What is schistosomiasis 3. Benefits of treatment 4. Eat before you attend 5. Who is eligible 6. Preventive measures

6D) 1. School children 2. Parents 3. Parents & children 4. Adults targeted for treatment 4. Children not at school 5. Anyone who came to clinic 6. Anyone who came to meeting

Q7A. Were you involved in other activities for the drug distribution? _____

Code 7A: 1. Distribution activity (Recording, measuring, tablet dispensing) 2. Bringing people for treatment 4. Supervision of treatment 5. Other

	Children at school	Children not enrolled	Adults
Q7B Where was treatment provided for			
Q 7C For what duration (in days)			
Q7D In your view was this adequate? Yes /No			
Q7E If not adequate how could it be better provided (continue on line below)			

Code 7B: 1. In school 2. At health centre/health post 3. In communal location (e.g. market, church/mosque) 4. Near the fields 5. Distributor went to houses 6. Don't know /won't say 7. Other (specify)

7E

Q8. Were there any problems or issues during the treatment? Please mark Yes against any problems that occurred in your village / school.

Codes Q8: 1. Insufficient drugs; 2. Lacked register; 3. Lacked dose pole; 4. HSA not available for MDA; 5. school went on holiday; 6. Not enough information by school; 7. Rumours on side effects; 8. other rumours; 9. Villagers didn't come to distribution point; 10. Little information on time/place; 11. Little information on treatment benefit;

Q9. Was anything done to solve the problem(s) or issue(s)?

Codes: 1. No 2. Extra school/health meetings with parents 3. Extra village meetings 4. Other please specify

Q10. If yes, was it effective?

Q11A. Has anyone given you feed-back on the performance of the campaign ? **Yes /No**

Q11B. Have you been told how many treatments were given? **YES / NO**

Q11C. Do you think coverage in the village was **GOOD / ALRIGHT / POOR/**

Q12. What would you suggest should be done next time to improve coverage?

Annex 4

Random selection of communities from well and poorly performing strata.

Information provided on the 2 districts

	Mangochi	% of total	Mulanje	% of total	Total
Villages	804	58%	584	42%	1,388
Primary schools	258	63%	153	37%	411
Health facilities	44	66%	23	34%	67
School age children	299,855	63%	178,775	37%	478,630
Adults	413,396	60%	278,117	40%	691,513
Under 5 years	159,761	61%	102,339	39%	262,100
Total population	873,012	61%	559,231	39%	1,432,243

If reported coverage is not available then use systematic sampling to select every nth village from the village list. Select 40 villages from Mangochi and 25 villages from Mulanje

If reported coverage is available

1) Using the reported coverage identify how many communities have coverage of 50% or less and how many communities have coverage of more than 50%.

2) Calculate the sampling interval for each strata of good and poor coverage

In this example we assume that 25% of villages have poor coverage and 75% villages have good coverage and the sample size is 65 villages

SAMPLING INTERVAL

Coverage by strata	Poor	Good
	< 50%	>50%
Villages	347	1,041
Number villages to select	16 ^A	49 ^B
Sampling Interval	22	21

$$A = 347 * 0.25 \quad B = 1041 * 0.75$$

Sampling interval = $\frac{\text{Villages in strata}}{\text{Villages selected}}$

3) Draw up a list of all villages from both districts with poor coverage, include them in order of the health facility. i.e. in H/facility 1 list all villages with poor coverage, then go to H/Facility 2 etc.

4) Draw up a list of all villages from both districts with good coverage, include them in order of the health facility. i.e. in H/facility 1 list all villages with good coverage, then go to H/Facility 2 etc.

5) Choose the 6th* village on the poor list. This is the first village selected. Then count 22 villages (or a different number according to the sampling interval) (village 6, 28, 50, 72 etc will be selected)

6) Do the same for the villages with good performance - the first village to be selected will be village 14* on the list

Note: I have already randomly selected the first village numbers for steps 5) and 6).

7) It is proposed to use 4 teams each with 4 enumerators.

8) Check which villages lie close to each other and make up a time table for each team – to minimise travelling.