

Liberia Coverage Survey 2017 Recommendations Report



1 Programmatic Recommendations

This report reviews the Liberia coverage validation survey which was conducted in 3 counties (7 districts), in May 2017 following 1 round of mass preventive chemotherapy (PC) for schistosomiasis (SCH) and soil-transmitted helminths (STH) in March 2017. The following programmatic recommendations are:

Table 1: Observations and corrective measures to help improve the high/low coverage in Liberia

Finding or observation	What to look for	Corrective action
Reported coverage was much lower than surveyed coverage in one county (Maryland).	Treatment registers are incomplete and/or aggregated data are incorrect.	Conduct Data Quality Assessment to identify where the data reporting system is breaking down
Reported and survey coverage were above 75% in one county (Gbarpolu) and survey coverage was 99% in another (Grand Gedeh).	All elements of the MDA programme are well in place and functional.	National programme to sustain programme momentum for the next year to maintain coverage levels.
In Gbarpolu and Maryland, coverage for children who attend school was higher than for those who do not ($p = 0.01$ and $p < 0.0005$ respectively). In Grand Gedeh there was no statistical difference in coverage for attending and non-attending SAC.	Poor communication and outreach of MDA in the communities to reach all school-aged children.	National programme, supported by SCI, to determine and pilot alternative strategies to improve coverage in non-enrolled SAC for 2018/19 MDA i.e. <ul style="list-style-type: none"> Investigate feasibility of increasing the number of days of distribution in the communities Review current sensitisation/mobilisation messages targeting households with non-attending SAC and re-develop
Communication channels were under-utilised.	Main method of sensitisation is through teachers and health professionals, other methods such as town criers are under-utilised.	Reinforce the importance of sensitisation messages during training Conduct a needs assessment of all social mobilisation and evaluation of current tools (radio, posters, town criers, health professionals, etc.) in Liberia

Finding or observation	What to look for	Corrective action
Refusal to take medications was low.	Highest reasons given for refusal were not aware of the MDA.	<p>Reiterate the importance of sensitisation messages during training and increase the number of days of social mobilisation</p> <p>Conduct refresher training prior to distribution</p> <p>Consider carrying out focus group discussions to identify why distributions didn't occur in certain villages. Information from these discussions will be used to determine the appropriate course of action.</p>
All tablets were taken together	Tablets of PZQ were all taken together	Sustain this critical programme practice for all future MDAs
Coverage rate was similar in both boys and girls indicating equity by gender	Maintain coverage good coverage rates	Sustain this critical programme practice for all future MDAs

2 Methods

All methods described in associated protocol:

https://imperiallondon.sharepoint.com/:w:/r/sites/fom/schisto/mer/2_Country_M%26E/LBR/Coverage/FY_1617/1_Protocol_%26_pre-survey/LBR_Coverage_Survey_Protocol_2017.docx?d=w8b427b05928941779c398bea86a43c69&csf=1&e=judU2n

2.1 Field methods

The modified random walk procedure was used to select households for interviews during data collection.

Supervisors undertook spot checks on the data during fieldwork and resolved identified issues prior to uploading the data. Data cleaning was later undertaken by the SCI MER team, with the field team providing clarifications and responses to queries where required.

2.2 Deviations from protocol

- Per the protocol 17 communities were visited per county. In Gbarpolu and Maryland 15 of the 17 selected sites and 2 reserve sites were visited. In Grand Gedeh only 9 primary selected communities were visited, and 8 reserve sites were used. Severe weather resulted in many areas being inaccessible.
- The protocol required 15 households per community to be surveyed. 33 communities had exactly 15 households (65% of the 51 communities surveyed); one had 16 households; another had 17 households; and the remaining 16 communities had fewer than 15 households.
- All children interviewed were within the correct age range (5 – 14 years of age) and 43% were girls. The protocol required approximately 50% girls; this is small and acceptable deviation.

2.3 Ethical approval

Ethical approval was granted by the University of Liberia – Pacific Institute for Research & Evaluation Institutional Review Board (located here):

https://imperiallondon.sharepoint.com/:i:/r/sites/fom/schisto/mer/2_Country_M%26E/LBR/Coverage/FY_1617/1_Protocol_%26_pre-survey/LBR_Coverage_Survey_Ethics_Approval_EN_Final_02112016.jpg?csf=1&e=m54gcb and

https://imperiallondon.sharepoint.com/:b:/r/sites/fom/schisto/mer/2_Country_M%26E/LBR/Coverage/FY_1617/1_Protocol_%26_pre-survey/LBR_Letter_of_explanation_for_new_sites_coverage_survey_April2017.pdf?csf=1&e=cbZXru) as well as by Imperial College Research Committee ICREC_8_2_2.

3 Survey Recommendations

Table 2: Observations and corrective measures for the survey process itself

Finding or observation	What to look for	Corrective action
For a small number of village interviews the interview date was input incorrectly.	Input field for interview date not matching interview start time recorded in the background.	Emphasise how to enter dates during the training and add a constraint or warning to the survey form to flag up inconsistent dates.
Repeated village forms	Repeated village names and ID's in the village data	Emphasise during training that the village level questionnaire should only be completed and uploaded once.
Use of reserve villages	Requests for extra villages from the survey team.	Try to time the survey to avoid severe weather

Finding or observation	What to look for	Corrective action
Incorrect entry of household information	The number of boys (5 – 15 years of age) and girls (5 – 15 year of age) living in the household exceeds the total number of people living in the household.	Emphasis on accurate recording of information during training. Add constraints to the survey forms so inconsistent values are flagged to the enumerator in real time.

4 Results

4.1 Dashboard

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Validated coverage by county, with and without adjustment for population size

Coverage split by gender (overall mean in black)

Comments

Coverage

County	Reported Coverage	Survey Coverage
GBARPOLU	85%	77%
GRAND GEDEH	73%	99%
MARYLAND	85%	47%

Grand Gedeh achieved coverage of 99%, all girls interviewed reported receiving the PZQ and only 2 boys said they had not.

Gbarpolu achieved overall coverage of 77% with boys reporting a slightly higher rate of coverage than girls.

Maryland had an overall coverage rate of 47% (unadjusted) with little difference between boys and girls.

School attendance and proportion of girls surveyed

County	Non-attendance	Girls surveyed
Gbarpolu	18%	44%
Grand Gedeh	22%	40%
Maryland	20%	45%

43% of the children interviewed overall were girls: 44% in Gbarpolu, 40% in Grand Gedeh and 45% in Maryland.

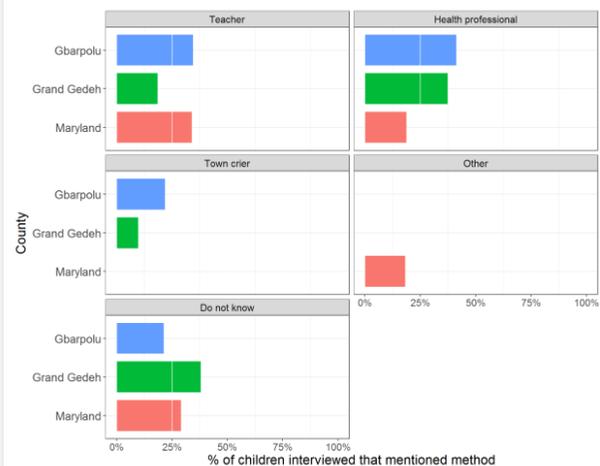
Overall 20% of the children interviewed did not attend school; 18% in Gbarpolu, 22% in Grand Gedeh and 20% in Maryland.

Overall the coverage was 77% for children who reported attending school and 58% for those who reported not attending, however, in Grand Gedeh there was little difference in the two groups.

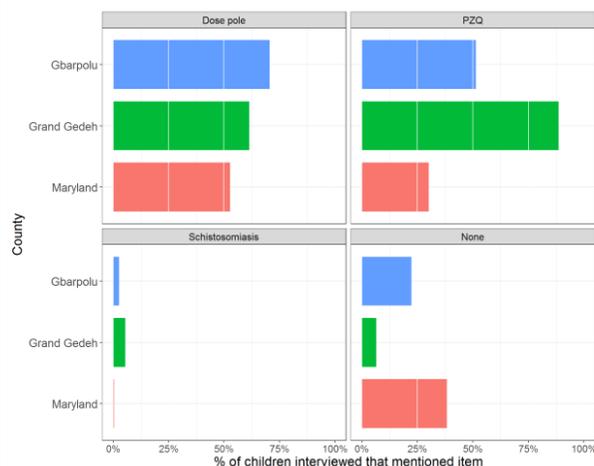
Average national wealth quintile of households interviewed by village (county mean in black)

Coverage split by school attendance (overall mean in black)

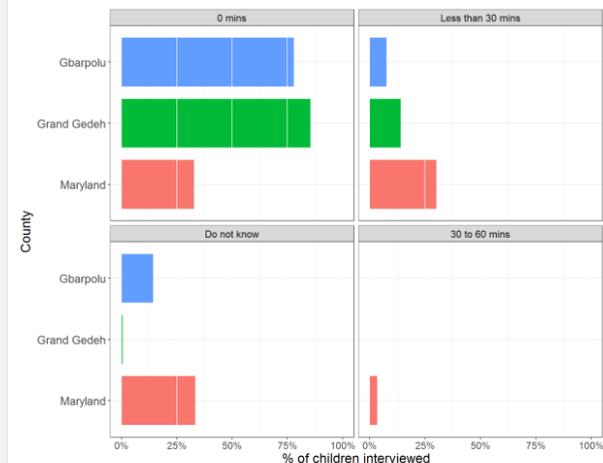
Methods of sensitization



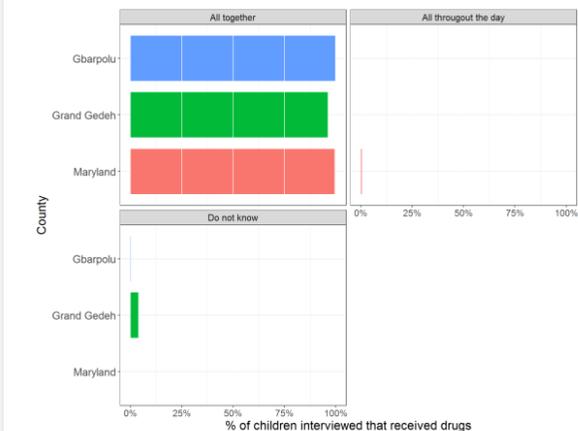
Recognition of words and items



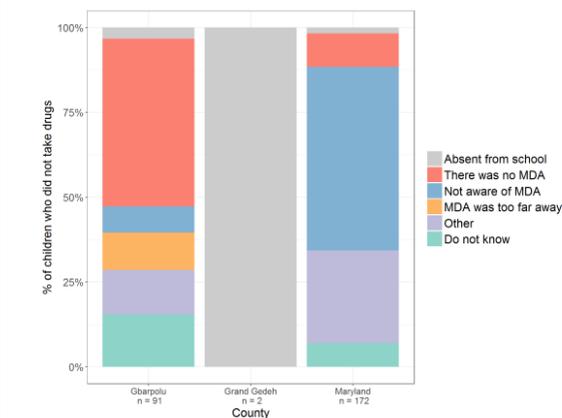
Distance from distribution point



How children took the drugs



Reasons for not taking drugs



Comments

Distributor

Almost all children who received PZQ reported the distributor was present when they did.

Reasons for not taking PZQ

In Grand Gedeh only 2 children said they did not receive PZQ.

The most frequent answer given for "Other" was "Took some medicine but not PZQ".

Other comments

99% of children who took PZQ reported swallowing all the pills at the same time.

Of those who did not receive the PZQ, in Maryland 54% said they were not aware of the MDA. In Gbarpolu 49% said there was no MDA.

4.2 Results table: children

Table 3. Coverage survey results overall and by district

Indicators	Overall	Gbarpolu	Grand Gedeh	Maryland
N villages	51	17	17	17
N children interviewed	1079	403	308	368
PZQ coverage: not adjusted for population size (95% CI)		75.8 (62.6, 85.4)	99.9 (99, 100)	41.7 (23.6, 62.3)
PZQ coverage: adjusted for population size (95% CI)		76.7 (59.3, 88.1)	99.4 (94.7, 99.9)	47.3 (36, 58.8)
Percentage of children attend school	80.2	81.9	77.6	80.4
PZQ coverage in attending SAC	76.8	81.2	99.6	53.4
PZQ coverage in non-attending SAC	58.4	56.2	98.6	22.2
PZQ p-value of difference between attendance		0.014	0.916	0.0001
Percentage girls	43.1	43.7	40.3	44.8
PZQ coverage in girls	71.8	75	100	47.3
PZQ coverage in boys	74.1	78	98.9	47.3
PZQ p-value of difference between sexes		0.40	0.12	0.67

Calculation of 95% confidence intervals of coverage, and p-value of differences between subgroups incorporated clustering at the village and household level. Statistical methodology is available from SCI on request.