

Burundi Coverage Evaluation Survey 2018 Recommendations Report



1 Programmatic Recommendations

This report reviews the coverage evaluation survey which was conducted in 2 districts (Bubanza and Nyanza Lac), Burundi. Since the programme started in 2007 there have been 11 rounds of mass preventive chemotherapy (PC) for schistosomiasis (SCH), with soil-transmitted helminths (STH). The previous treatment campaign took place in December 2017 and the coverage survey was conducted in April 2018. The following programmatic recommendations are:

Table 1: Observations and programmatic actions to help maintain and improve the high coverage in Burundi.

Finding or observation	What to look for	Programmatic action
Both reported and survey coverage were high in Bubanza and Nyanza Lac. All districts exceeded the World Health Organisation (WHO) target of 75% coverage of praziquantel (PZQ) and albendazole (ALB).	<p>Communities and drug distributors are motivated.</p> <p>All elements of the MDA programme are well in place and functional.</p>	Ministry of Health (MoH) to sustain programme momentum for the next year to maintain coverage levels.
Bubanza reported coverage was over 100% for PZQ and ALB. Nyanza Lac had a reported coverage lower than the survey coverage for PZQ only. Reported coverage for ALB was accurate.	<p>Figures on total population and eligible population (i.e. the denominator) are incorrect or outdated.</p> <p>All sub-district reports are not returned on time for inclusion in final report.</p> <p>Treatment registers are incomplete and/or aggregated data are incorrect.</p>	<p>MoH to liaise with the national statistics office to update and correct population data if more accurate population data exists before January 2019 mass drug administration (MDA).</p> <p>Strengthen registration process by extending practice on reporting treatment numbers during MDA cascaded training. Reiterate the importance of sending reports back to the central level on time before January 2019 MDA.</p> <p>MoH to ensure that registers are uniform in all districts with the collaboration of district health authorities and that training material is standardised before January 2019 MDA.</p> <p>Consider conducting Data Quality Assessment to diagnose where the data reporting system is breaking down.</p>

Finding or observation	What to look for	Programmatic action
Coverage was substantially higher for both PZQ and ALB in children who attend school than children who don't attend school.	Poor communication of MDA in the communities. Treatment is usually done in the schools for two days and the health centres for four days.	<p>Investigate ways to improve coverage in non-attending school age children (SAC) before January 2019 MDA.</p> <p>MoH to consider focus group discussions with district health authorities and drug distributors to understand potential reasons for the discrepancies.</p> <p>Reinforce during training of distributors that all children and not just those that attend school are eligible for treatment before next round of PC scheduled in January 2019.</p>
Communication channels were under-utilised.	Main method of sensitisation is through teachers, other methods (e.g. radio, town crier, place of worship) are under-utilised.	<p>MoH to reinforce the importance of sensitisation messages during training of distributors, trainers and supervisors at all levels of distribution before next round of PC in January 2019.</p> <p>Consider conducting a needs assessment of all social mobilisation and evaluation of current tools (radio, posters, health professionals, TV spots) in Burundi.</p> <p>MoH to ensure that standardised posters are used, and timings of the radio and TV spots are respected as planned.</p> <p>Consider revisiting timing and frequency of broadcast messages.</p>
Refusal to take medications was low.	Highest reasons given for refusal were not identified, children did not know why they did not take the drugs.	As children may say they didn't know because they were shy of the enumerator, training on techniques in interviewing children is essential for future surveys.
Coverage was similar in both boys and girls indicating equitable reach of the PZQ distribution.	No disparity in treatment coverage between gender.	Sustain programme momentum for the next year to maintain coverage levels.

Finding or observation	What to look for	Programmatic action
Coverage rate of ALB was significantly higher for boys in Nyanca Lac and for girls in Bubanza.	Disparity in treatment coverage between genders, with the two districts showing opposite results	<p>MoH to ensure all training and sensitisation material is standardised across districts.</p> <p>MoH to consider focus group discussions with district health authorities and drug distributors to understand potential reasons for the discrepancies.</p>

2 Methods

All methods described in associated protocol:

In English: https://imperiallondon.sharepoint.com/:w:/r/sites/fom/schisto/mer/2_Country_M%26E/BDI/Coverage/FY_1718/1_Protocol_%26_pre-survey/BDI_Coverage_Survey_Protocol_2017_FINAL.docx?d=we1df3ba0f96d46e2bd58bcb12584e4c1&csf=1&e=xhbrH7

In French: https://imperiallondon.sharepoint.com/:w:/r/sites/fom/schisto/mer/2_Country_M%26E/BDI/Coverage/FY_1718/1_Protocol_%26_pre-survey/BDI_Coverage_Survey_Protocol_2017_FR.docx?d=wfd330607b4684236a020b34e767c875e&csf=1&e=CPvOJY

2.1 Field methods

- The continued reliance on paper questionnaires limits the quality of the survey. Skip patterns, for example, were not correctly implemented.
- Due to the limitations of paper questionnaires, it was not possible to carry out daily data quality checks by the monitoring, evaluation and research (MER) team. Therefore, it was not possible to identify issues in data entry during the survey, so errors in protocol adherence may have taken place without Schistosomiasis Control Initiative (SCI)'s/in-country partners team's knowledge

2.2 Deviations from protocol

- In 7 of the 34 villages, fewer than the protocolled 15 households were interviewed, despite the village questionnaire recording the smallest of villages as having 338 households. In one case there are 11 interviews, in two cases 13 interviews, and in 4 cases 14 interviews.
- Skip patterns have either been erroneously entered or ignored.
 - Interviews where the individual is recorded as not giving consent, the enumerators have continued with data entry. Where individuals have been recorded as not interviewed, the subsequent questions have a full set of answers.
 - Enumerators did not comply with the skip patterns in the questionnaire, leading to contradictory results. For example, a 10 year old is initially recorded as taking ALB. Later in the questionnaire, it states 'reason why ALB not taken' followed by 'other reason why ALB not taken', which is meant to be skipped if the individual has taken it (in this case she has). The enumerator however has then written under 'other reason why ALB not taken', 'not eligible for ALB'.

2.3 Ethical approval

Imperial College Research Committee ICREC_8_2_2. No ethical approval by the country was required to carry out this survey.

3 Survey Recommendations

Table 2: Observations and corrective measures for the survey process

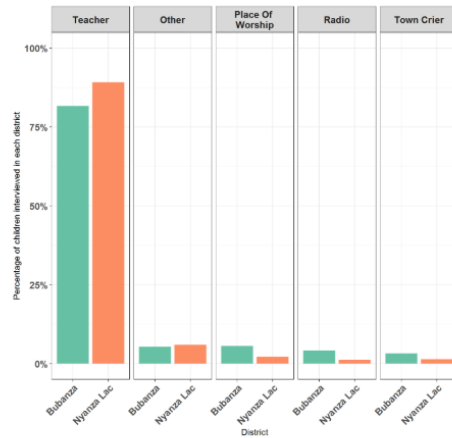
Finding or observation	What to look for	Corrective action
Insufficient number of households interviewed	There are fewer than 15 HH interviewed in a village	<p>Due to the delay between completion of the survey and the data analysis, it is not possible to gain accurate feedback on why this issue occurred.</p> <p>SCI to support the use of mobile phone devices to carry out data collection. This would ensure forms are completed and enables daily data quality monitoring. The latter allowing immediate feedback to supervisors and survey improvements.</p>
Ignoring of skip patterns	Lack of logical connection between answers for the same individual.	<p>SCI and MoH to consider electronic data collection on mobile phone devices, as this will allow to automatically enforce skip patterns.</p> <p>If mobile phones or tablet devices are not feasible due to SCI's limited opportunity to visit the country as a consequence of instability, SCI to prepare data entry forms in Excel that highlight skip pattern errors.</p>
At-risk adults targeted for ALB treatment, defined as ' <i>pregnant women in their 2nd and 3rd trimester</i> ', was statistically not representative.	<p>The survey protocol states to include all women (15 – 49 years old) in a household. The questions associated with this section of the survey are not inclusive of all women who may have been in the 2nd and 3rd trimester during the MDA (i.e. pregnancies not carried to term).</p> <p>Additionally, the sample size created is insufficient and statistically not representative.</p>	<p>SCI to discuss with the national programme if questions can be asked more openly about pregnancies without stigma.</p> <p>Independently of the outcome, SCI to review the questionnaire with the national programme to ensure all individuals who ought to be asked about their ALB intake are correctly identified.</p>

4 Results

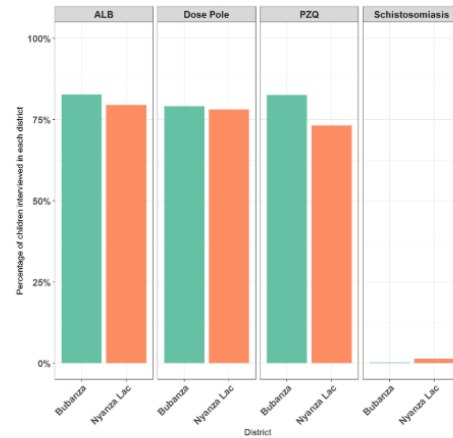
4.1 Dashboard

Burundi Coverage Survey 2018		Page 1: MDA coverage for school aged children	Page 2: Additional Information	SCI Schistosomiasis Control Initiative pdf
<p>PZQ District Coverage & 95% CI for Children Split by whether adjusted for population size (* reported coverage)</p>	<p>PZQ coverage of children in each district split by school attendance (Overall mean in black)</p>	<p>PZQ coverage in each district split by gender (Overall mean in black)</p>	<p>Comments</p> <p>Survey coverage of PZQ is above the 75% WHO target in both districts. Survey coverage is higher than reported coverage in Nyanza Lac (92.9% in the survey, 86% by reported coverage). The reported coverage in Nyanza Lac was also slightly lower than the lower 95% confidence interval for survey coverage - 86.5%. Survey coverage was lower than the reported coverage in Bubanza, 94.6% compared to 112%.</p> <p>Coverage is clearly higher for children attending school, although the difference is only statistically significant for the overall data, rather than the smaller sample district results.</p> <p>There are no significant differences in PZQ coverage by gender.</p>	
<p>ALB District Coverage & 95% CI for Children Split by whether adjusted for population size (* reported coverage)</p>	<p>ALB coverage of children in each district split by school attendance (Overall mean in black)</p>	<p>ALB coverage in each district split by gender (Overall mean in black)</p>	<p>Comments</p> <p>ALB coverage is similar to PZQ coverage. In both districts the WHO goal of 75% coverage is reached. For Nyanza Lac reported coverage falls within the confidence interval of the survey coverage both with and without adjusting for the survey structure. Reported coverage for ALB in Bubanza was 117% compared to 97.6% from the survey.</p> <p>Differences in coverage by attendance for ALB are smaller than for PZQ yet still significant.</p> <p>Gender differences in coverage for ALB were not significant. In Nyanza Lac, survey coverage for ALB in girls and boys was 94.5% and 96.6% respectively. In Bubanza the survey coverage for ALB in girls and boys was 99.0% and 96.1% respectively.</p>	

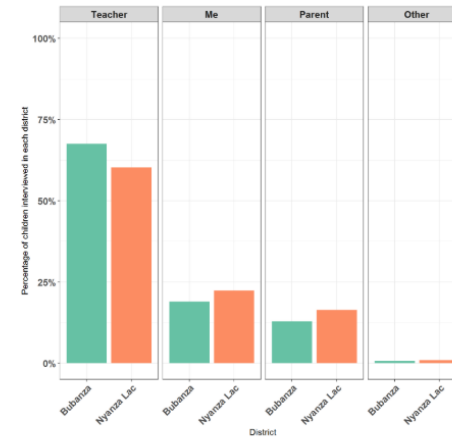
Child sensitization: How did you hear about MDA?



Item recognition



Person deciding whether to take drugs

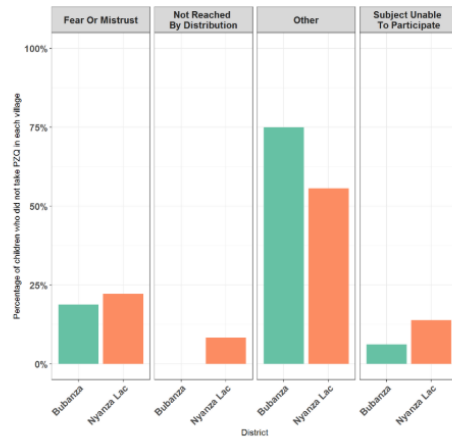


Comments

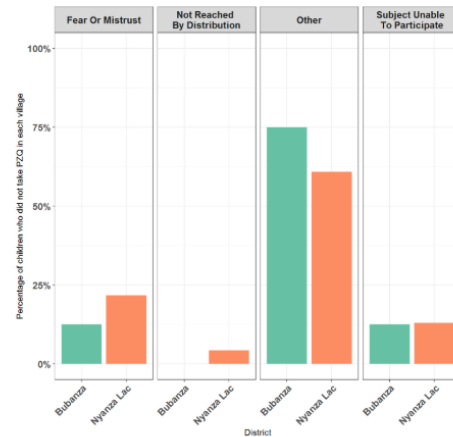
The main source of information about the MDA for children was their teachers. Five out of every six children in Bubanza and seven out of every eight children in Nyanza Lac heard about the MDA primarily from their teacher. For the question "who decided whether you should take the drugs or not" the most popular answer given was "the teacher".

In terms of recognition of MDA items, both drugs and the dose pole were widely identified. However the disease itself was not recognised by children.

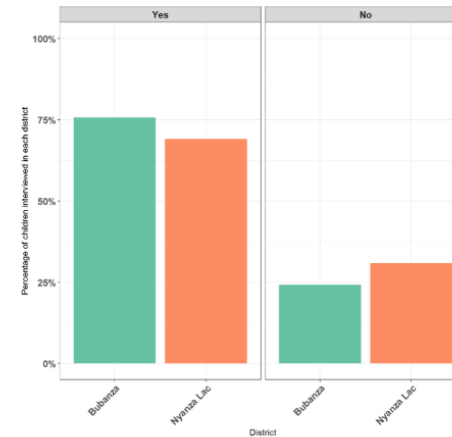
Why PZQ was not taken



Why ALB was not taken



Did the child eat before taking medication



Comments

Among the few children who did not take PZQ or ALB, the majority were noted down as the children not knowing why they did not take it.

About one in five children who did not swallow PZQ stayed away from the MDA for fear of side effects, because of rumours heard or a bad taste or smell from the drugs. Some stated being sick at the time of the MDA or not eligible and hence unable to participate.

Of those children who took the drugs during the MDA, three quarters ate before the ingestion of ALB and/or PZQ.

4.2 Results table: Children and women

Table 3. Coverage survey results overall and by district for SAC

Indicators	Overall	Bubanza	Nyanza Lac
N villages	34	17	17
N children interviewed	872	443	429
Percentage of children attending school	89.1%	86.7%	91.6%
PZQ coverage: not adjusted for population size (95% CI)	96.4% (95.0% - 97.5%)	98.2% (96.4 – 99.1%)	94.6% (92.0% - 96.4%)
PZQ coverage: adjusted for population size (95% CI)	96.5% (93.4% - 98.1%)	97.6% (93.6 – 99.1%)	95.5% (89.8% - 98.1%)
Percentage girls	51.9%	50.6%	53.4%
PZQ coverage in girls	93.5%	95.5%	91.8%
PZQ coverage in boys	93.9%	93.7%	94.2%
PZQ p-value of difference between sexes	0.37	0.37	0.38
PZQ coverage in school attending SAC	96.7%	98.6%	95.1%
PZQ coverage in non-school attending SAC	68.6%	72.0%	62.8%
PZQ p-value of difference in attendance	0.01	0.07	0.08
ALB coverage: not adjusted for population size (95% CI)	93.2% (91.3% - 94.7%)	95.7% (93.3% - 97.2%)	90.7% (87.5% - 93.1%)
ALB coverage: adjusted for population size (95% CI)	93.7% (89.8% - 96.1%)	94.6% (88.1% - 97.6%)	92.9% (86.5% - 96.4%)
ALB coverage in girls	96.5%	99.0%	94.5%
ALB coverage in boys	96.4%	96.1%	96.6%
ALB p-value of difference between sexes	0.46	*	0.02
ALB coverage in school attending SAC	97.7%	99.9%	95.9%
ALB coverage in non-school attending SAC	85.5%	83.3%	89.3%
ALB p-value of difference in attendance	<0.01	<0.01	0.15

* Models do not converge

The data for women (Table 4), as described above in the survey recommendations (Table 2), cannot be seen as representative and hence are to be taken as indications rather than as results.

Table 4. Coverage survey results overall for at-risk adults targeted for ALB treatment, defined as ‘pregnant women in their 2nd and 3rd trimester’

Indicators	Overall	Bubanza	Nyanza Lac
N villages	34	17	17
N women interviewed	70	35	35
Percentage of at-risk women from women interviewed	9.7%	9.7%	9.6%
ALB coverage (unweighted)	87.0%	88.6%	85.3%

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.

4.3 PDF of dashboard



BDI_CS2018_Dashb
oard.pdf