Niger Coverage Survey 2017
Recommendations Report

REPUBLIQUE DU NIGER

SCI Schistosomiasis Control Initiative

Imperial College London

1 Programmatic Recommendations

This report reviews the coverage validation survey which was conducted in 3 districts, Niger, in July 2017 following 1 round of mass preventive chemotherapy (PC) for schistosomiasis (SCH) in February and March 2017. The following programmatic recommendations are:

Table 1: Observations and corrective measures to help [maintain and] improve the high/low coverage in Niger.

Finding or observation	What to look for	Corrective action
Generally large discrepancies between reported and validated coverage. There is some evidence that the treatment coverage for Ouallam might be below 75% but estimate for validated coverage came with low precision (*see 3. Survey Recommendations*).	Whether figures on total population and eligible population (i.e. the denominator) and treated population (numerator) are outdated, unavailable or incorrect.	Investigate, update and correct population data and reported treatment data if more accurate population data exists for villages. PNLBG (Programme National de Lutte contre la Bilharziose et les Geohelminthiases) at the Ministry of Health would be responsible to check the latest data available at the National Institute of Statistics Consider conducting Data Quality Assessment to diagnose where the data reporting system is breaking down. PNLBG will be the lead on it and the DQA can be done anytime between July-December 2018
Nomadic population were excluded from the survey, but they could be a significant proportion of the population.	What proportion of the total population are the nomadic population	PNLBG to lead the investigation of different sources of information in Niger and determine the proportion of the nomadic population. Subsequently, decide on next steps based on the findings with SCI and other partners. The on this action
The coverage for boys and girls were similar in Dosso and Filingue. In Ouallam the coverage of boys was significantly lower than for girls.	Poor communication of mass drug administration (MDA) in schools and in the communities. Any other special circumstances of Ouallam such as difference in school attendance between boys and girls.	PNLBG to investigate ways to improve coverage in boys in Ouallam. It is recommended that the PNLBG communicates with the district health officer to understand the lower coverage among boys and then analyse the situation from there. It is recommended to discuss this with the Ouallam district officer before October 2018 (when the next MDA will take place)

Finding or observation	What to look for	Corrective action
Coverage was substantially higher in children who attend school than children who don't attend school.	Poor communication of MDA in the communities.	PNLBG to investigate ways to improve coverage in non-attending SAC. Focus group discussions could be conducted to understand at what level the communication failed. SCI could support the PNLBG in these surveys. It is recommended that actions of these happen before the next MDA in October 2018. Investigate feasibility of increasing the number of days of distribution in the communities
Refusal to take medications was low.	Highest reasons given for refusal were around fear and rumours, followed by distribution not taking place in the village.	PNLBG to reiterate the importance of sensitisation messages during training and increase the number of days of social mobilisation. PNLBG to conduct refresher training prior to distribution.

2 Methods

All methods described in associated protocol:

In English :

https://imperiallondon.sharepoint.com/sites/fom/SCI/The%20Hub/NER_Coverage_Survey_Protocol_2017_EN.docx?d=w2d14fc80cb5543d7841373ee7fa8345f&csf=1

In French:

https://imperiallondon.sharepoint.com/sites/fom/SCI/The%20Hub/NER_Coverage_Survey_Protocol_2017_FR.docx?d=w2604d8a371b748068080cc2356e96773&csf=1

2.1 Field methods

- In all villages the 'Random Walk' method was used to select the households to be surveyed.
- The teams used SurveyCTO on phones provided by SCI to collect the data
- During the survey the incoming data were checked for correct numbers of villages and households per village by SCI biostatistician in July/August 2017.

2.2 Deviations from protocol

- All selected sites were visited, no reserve sites were used.
- The village list from which the villages were selected also contains nomadic camps which only exists during the grazing season in summer and are dispersed during the remainder of the year. These camps were filtered out for the site selection as they did not exist during the survey.
- A number of the selected villages (Toudou Wada, Gounize, Alassan Koira, Ayouba Koira, Bagou, Goubangou/Karam Karam Koira, Hamani Kouara, Kounam Peul) were only small hamlets with less than 15 households. For this reason, less than 15 households were interviewed in these villages. Many of these small hamlets were in the Ouallam district.
- The number of interviewed children was in Ouallam with 294 much smaller than in the Dosso and Filingué district with 373 and 363 interviewed children respectively. While in Ouallam in 10 villages less than 20 children were interviewed this was only in 3 villages the case for each of the other two districts.

2.3 Ethical approval

Ethical approval was waived by the Ministry of Public Health of Niger
https://imperiallondon.sharepoint.com/sites/fom/SCI/The%20Hub/NER-MER%20Ethics%20Committee%20Waiver.pdf?csf=1

3 Survey Recommendations

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

Finding or observation	What to look for	Corrective action
In the Ouallam district in 9 villages less than 12 households were interviewed.	This was because a high number of small hamlets were randomly selected for Ouallam. Insufficient numbers of households in these villages was not known before the survey.	SCI MER team needs to discuss the issue with the PNLBG during the village selection and find suitable corrective measures. For example, increase the number of surveyed villages, or increase the number of people interviewed in other villages nearby to have a sufficient sample size.

Finding or observation	What to look for	Corrective action
During the grazing season (September to April) there are nomadic camps ("Campement Peulh"). Outside the grazing season the nomadic population joins the settled population and therefore should be reached there through the MDA and any coverage evaluation survey.	However, we cannot identify nomads in our data so, if a person has not been reached by the treatment because he or she lived in nomadic camps during the treatment it is not possible for us to establish this link through the data.	In next survey protocol development SCI to add a suitable question in the individual questionnaire to identify nomads.

4 Results

4.1 Dashboard

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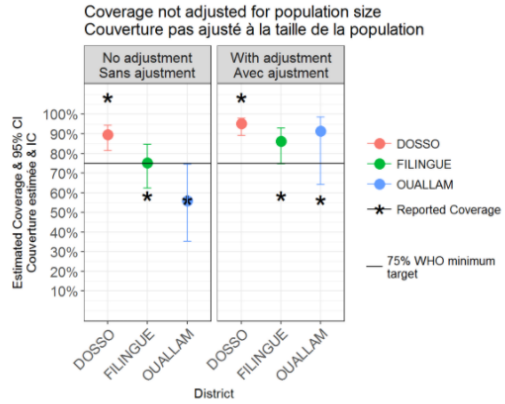
The coverage target was met in Dosso and Filingué. The results for Ouallam come with a great uncertainty but there is some evidence that the coverage targets for Ouallam might not have been met.

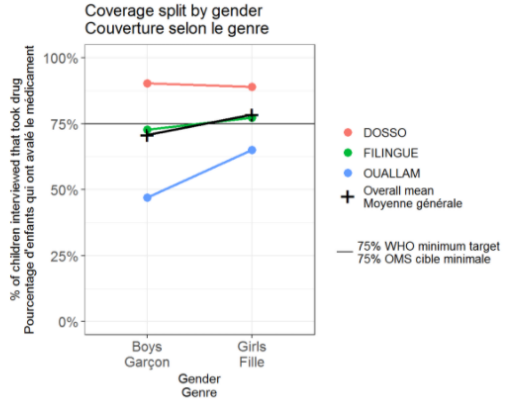


Commentary

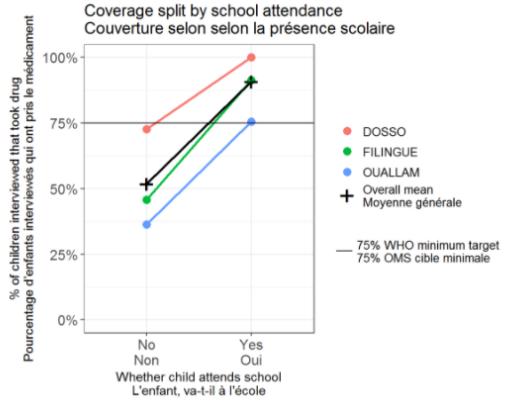
- Dosso: Treatment coverage of 89.5% (with adjustment to population size 95.1%)
- Filingué: The bigger confidence interval is due to fewer children interviewed than in Dosso. The treatment coverage was 75.1% (86.1% with adjustment for population size)
- Ouallam: The number of interviewed children was lower in Ouallam than in the other two districts. Many very small villages were visited and the village coverage varied between 0% and 100%. This results in a great uncertainty in the estimated treatment coverage. The non-adjusted estimate for treatement coverage is 55.8%, the adjusted estimate is 91.5% with a lower limit of the confidence interval below 75%.

The reported treatment coverage does not separately state the coverage of school-age children. The reported coverage numbers for SACs used here were derived from two tables which were not completely compatible.

The coverage for boys and girls was similar in Dosso and Filingué but significantly lower for boys in Ouallam.



The coverage for school attending children was significantly higher for school attending children in all three districts.



Commentary

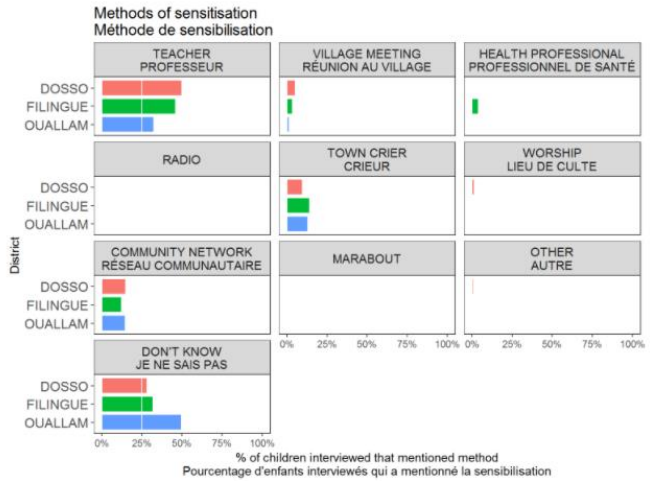
The coverage for boys and girls were similar in Dosso and Filingué. In Ouallam the coverage of boys was with 47.0% significantly ($p = 0.004$) lower than for girls (65.0%). Due to the lower number of sampled children in this district the precision of these estimates is lower than for the other two districts.

The overall coverage was 51.8% for non-attending and 90.8% for attending children. The percentage of children not attending school was:

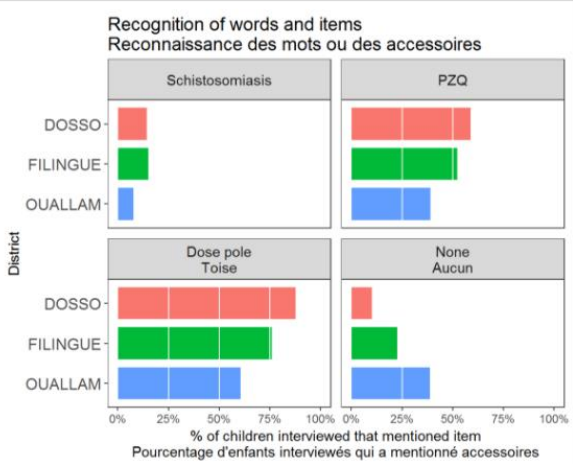
- Dosso 38.3% (n = 143)
- Filingué 35.5% (n = 129)
- Ouallam 48.6% (n = 143)

The coverage of non attending children ranged between 36.3% for Ouallam and 72.7% for Dosso and of attending children between 75.5% (Ouallam) and 100% (Dosso).

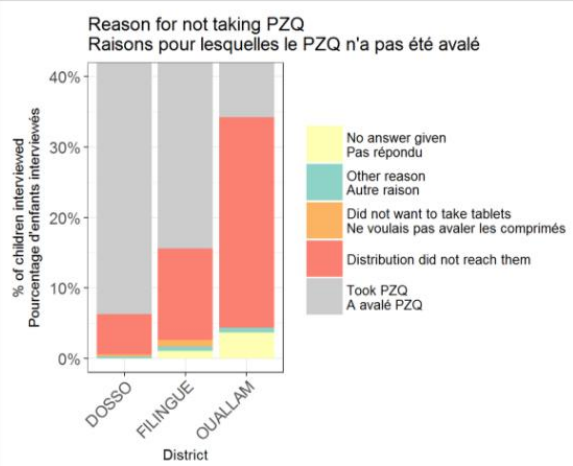
49.3% (n = 145) of the children in Ouallam didn't know where they heard about the MDA or didn't know about an MDA.



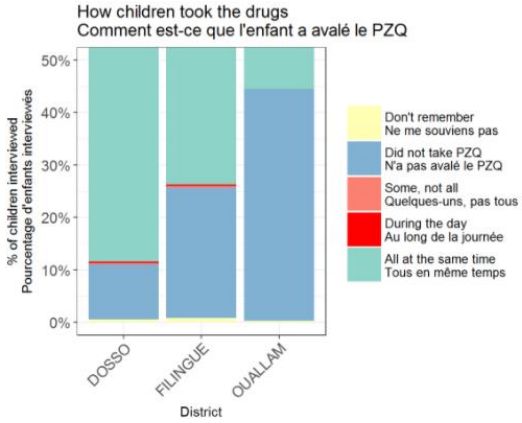
Between 60.5% (Ouallam) and 87.7% (Dosso) of all interviewed children recognised the dosepole. 38.8% of the children in Ouallam didn't recognise any of the props.



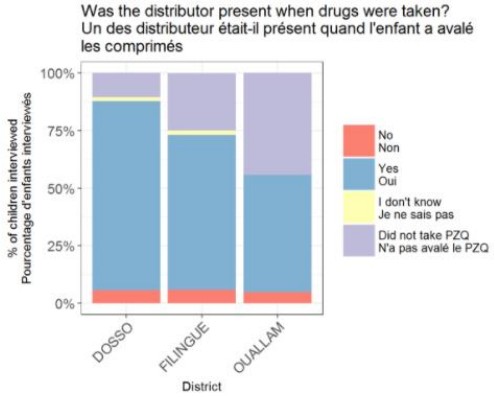
29.8% of the children in Ouallam and 13.0% of the children in Filingué said the distribution did not reach them.



If children took PZQ they took all tablets at the same time.



Between 4.8% and 5.8% of the children said the distributor was not present when they swallowed the tablets.



Commentary on additional information

Only 4 children did not want to take the tablets. The main reason for not taking PZQ was that the distribution did not reached the child.

In three villages in Ouallam (AYOUBA_KOIRA, BANEYTILWA, BARRARA) all children said they either did not take the tablets or couldn't remember.

Of the children treated with PZQ at least 89.7% reported the distributor was present when the swallowed PZQ and more than 98% said they swallowed all tablets at the same time.

4.2 Results table: children

Table 3. Coverage survey results overall and by district

Indicators	Overall	Dosso	Filingué	Ouallam
N villages	51	17	17	17
N children interviewed	1030	373	363	294
PZQ coverage: not adjusted for population size (95% CI)		89.5% (81.5% , 94.3%)	75.1% (62.4%, 84.5%)	55.8% (35.3%, 74.5%)
PZQ coverage: adjusted for population size (95% CI)		95.1% (89.1%, 97.9%)	86.1% (74.7%, 92.9%)	91.5% (64.2%, 98.5%)
Percentage of children attend school	59.1%	61.7%	63.9%	50.0%
PZQ coverage in attending SAC	90.8%	100.0%	91.4%	75.5%
PZQ coverage in non-attending SAC	51.8%	72.7%	45.7%	36.4%
PZQ p-value of difference between attendance		0.92	(*)	< 0.001
Percentage girls	51.9%	55.5%	51.0%	48.6%
PZQ coverage in girls	78.5%	88.9%	77.3%	65.0%
PZQ coverage in boys	70.5%	90.4%	71.9%	47.0%
PZQ p-value of difference between sexes		0.57	0.27	0.004

(*) not available as model did not converge

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

https://imperiallondon.sharepoint.com/sites/fom/SCI/The%20Hub/NER_coverageSurvey2017_dashboard_EN.pdf