POST MDA COVERAGE SURVEY REPORT
MDA COVERAGE SURVEY REPORT
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GiveWell

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Contents

Executive Summary

Background: In 2019, Sightsavers with funding from GiveWell, in collaboration with the Federal Ministry of Health (FMoH) supported four State Ministries of Health (SMoH) to provide treatment for Schistosomiasis and Soil transmitted helminthiasis in Nigeria. These states are Benue, Kebbi, Kwara and Sokoto. Mass drug administration (MDA) with Praziquantel (PZQ) and Mebendazole (MEB) was conducted between January and March 2019 in 80 endemic Local Government Areas (LGAs) across these states, with over five million school age children at risk of these diseases. This treatment coverage survey (TCS) was conducted between August 8th - 18th 2019, to validate the reported coverage rates.

Methodology: The coverage survey took place in 10 LGAs of four States. Two LGAs were randomly selected from each state using Stata statistical software. Coverage Survey Builder (CSB) v2.11 was used to determine sample size appropriate for the survey, selection of subunits, segmentation and systematic selection of households within the selected subunits. All School Aged Children (SAC) living in a selected household were interviewed. Mobile phones were used to capture the survey data.

Results: A total of 2,738 households in 272 clusters of 10 LGAs across four States participated in the survey with 7,904 children interviewed. 36 were excluded from analysis because they could not remember swallowing PZQ. The surveyed PZQ coverage rates recorded across 10 LGAs ranged from 56.4% [CI: 41.5 - 70.2] 96.1% [CI: 93.2 - 97.9] in Illela (Sokoto) and Edu (Kwara) respectively. Programme coverage using the projected 2006 national population census was reported as between 56.2% in Ngaski (Kebbi) and 96.4% in Illela (Sokoto). The surveyed coverages were within the WHO benchmark for Schistosomiasis treatment of reaching at least 75% school age population in seven LGAs while three LGAs were below the benchmark. Reported programme coverage in four LGAs were validated as these fell within the 95% CI of the survey report. The overall PZQ coverage among boys and girls in all the LGAs surveyed showed no significant difference (p=0.4426), except in Illela LGA (p=0.0252). Coverage in term of enrollment showed a significant difference (p=0.0000) except in Birnin Kebbi, (p=0.1393), Gwer West (p=0.0978) and Ngaski (p=0.1798). The most common communication channels for information dissemination were community directed distributors and classroom teachers.

Recommendations: Reported LGA-level coverages were at variance with surveyed coverage results, suggesting over reporting and under reporting in some LGAs. This finding reveals the need for data quality assessment (DQA) and intensified field monitoring to enhance the skills and competencies of community drug distributors (CDDs) and teachers and improved training.

1. Background

Neglected tropical diseases (NTDs), which are a group of parasitic and bacterial infectious diseases, affects the world's poorest populations. Nigeria is estimated to have the highest number of people infected with NTDs in Africa, which includes the highest burden of endemicity of intestinal helminth infections and cases of Schistosomiasis (WHO 2015; Hotez and Kamath 2009).

Schistosomiasis (SCH) or Bilharzia is a parasitic disease caused by infection with the trematode blood-flukes Schistosomes. In Nigeria, it is a disease of growing importance due to inadequate potable water, activities related to water resource development for irrigation and fishing. The disease mainly affects school age children and prolonged untreated infections can cause diseases such as cancer of the bladder, anaemia and liver dysfunction. About 116 million out of the estimated 555 million Africans are at risk as at 2006 (WHO/TDR Report, 2008). On the other hand, Soil-transmitted helminthiasis (STH) is caused by infection with a group of intestinal nematode worms, mostly in sub-Saharan Africa are the hookworms (*Ancylostoma duodenale* and *Necator americanus*), the roundworm (*Ascaris lumbricoides*) and whipworm (*Trichuris trichiura*). These diseases are among NTDs and remain a serious public health problem, posing unacceptable threats to human health and welfare.

The World Health Assembly resolution 54.19 urges all member States to treat at least 75% of all school age children (SAC) regularly who are at risk of morbidity from SCH and STH with Praziquantel (PZQ) and Albendazole or Mebendazole (ALB or MBD), respectively. This means that achieving and maintaining adequate coverage during MDA, is paramount to the success of NTD control and elimination programmes. Low coverage may necessitate additional MDAs or if unnoticed, may lead to poor impact evaluation results.

Monitoring and evaluation of treatment coverage following campaigns is therefore essential to identifying areas with low coverage so that appropriate changes to programme implementation can be made. It therefore became necessary to conduct an

independent coverage survey, following the completion of MDA campaigns between January and March 2019 in Kebbi, Sokoto, Kwara and Benue State. This independent survey was to assess project performance and services delivered to programme beneficiaries and was conducted from August 2019 in these states.

2. Aims and objectives of survey

2.1 Aim

To validate reported treatment coverage of Preventive Chemotherapy (PC) for SCH/STH for the MDA campaign in 2019.

2.2 Objectives

1. To compare reported and validated coverage of PZQ and MBD for School Aged Children (SAC)
2. To assess coverage in SAC disaggregated by gender and school attendance
3. Collect information on why targeted eligible individuals did not receive or accept treatment
4. To identifying reasons for non-compliance in the recent MDA, campaign by drug distributed, sex, age, wealth status and geographic location.
5. To assess coverage in terms of disability and household economic status

3. Methodology

3.1 Study area

Treatment coverage survey was conducted at the MDA implementation unit (IU) level, the LGA in Nigeria. To mitigate recall bias, LGAs were randomly selected from those that had completed MDA within three months of TCS. Randomization of LGAs was done using Stata, a statistical software. Ten LGAs were selected from four states. Two LGAs each in Sokoto (Illela and Tambuwal) and Kwara (Edu and Patigi) States and three LGAs each in Kebbi (Birnin Kebbi, (Maiyama and Ngaski) and Benue (Gwer West, Oju and Vandeikya) States. The programme coverage rates of the sampled LGAs are shown in table 1.

Table 1: Programme coverage rate of selected LGAs by intervention

State	LGA	Intervention	Programme Coverage	
			SCH	STH
Benue	Gwer West	SCH/STH	76.9%	76.9%
	Oju	SCH	76.9%	
	Vandeikya	SCH/STH	76.8%	76.9%
Kebbi	Birnin Kebbi	SCH	76.1%	
	Maiyama	SCH	68.2%	
	Ngaski	SCH	56.2%	
Kwara	Edu	SCH	76.8%	
	Patigi	SCH	76.3%	
Sokoto	Illela	SCH	96.4%	
	Tambuwal	SCH	59.9%	

3.2 Survey methodology

A cross-sectional population-based survey was conducted in order to determine the proportion of individuals reporting taking the drugs (PZQ and/or MEB) during the last round of school-based MDA.

Survey methodology was based on WHO recommended guidelines. Within the selected LGAs, the survey followed a two-stage cluster sampling methodology, with the primary sampling unit (PSU), being the community/village and the secondary cluster, the household. The purpose and procedure of the survey was explained to the head of every randomly selected household, and a verbal consent was obtained. Assent was also obtained from all children interviewed. The survey team informed participants that they were free to decline participation in the survey and this will not be held against them. A

questionnaire was administered to the head of households and then to children 5-14 years of age in the household (permanently resident), asking their age, sex, status of school enrolment, whether they participated in the MDA, if they swallowed the drugs and if not the reason why, based on the sample selection procedures.

The person responding to each question was recorded. When a person was not available or sick and could not answer questions, another household member or caregiver answered on their behalf. Primary caregivers assisted on behalf of children aged 5-10 years old, but children were encouraged to respond directly. Sample tablets of the drugs and the packages used during the recent MDA was shown to the household member to assist their recall. Only school age children were asked whether they took either SCH or STH treatment.

3.3 Sampling

3.3.1 Sample size

The survey was powered to determine coverage at the LGA level, for the target group of 5-14 years for SCH/STH. The sample size was determined using the WHO Coverage Survey Builder, version 2.11. Details regarding the sampling and selection methodology are available in the WHO manual.

The following parameters were used in the survey builder:

1. 2019 community treatment list
2. Estimated coverage of 60%
3. Precision of +/-7%
4. 95% confidence level or z score of 1.96
5. Non-response rate of 15%
6. Average eligible of target group per household 1.4

A minimum of 886 individuals were expected to be sampled per LGA. These were divided across 30 clusters (communities). In each cluster, 21 households were sampled. Households were selected after community segmentation according to a random, pre-defined list.

3.3.2 Sensitization of Clusters

The survey supervisors oversaw that the leaders of each cluster selected for the coverage survey were aware of the survey in advance of the team's visit. During this sensitization

visit (or phone call) with the local leaders, the representative from the survey team had to share the purpose of the coverage survey and discussed the optimal day of the week and time of day for the survey team to visit in order to find members of the survey population at home.

3.3.3 Division of Community into Segments

As teams arrived in the selected villages, they identified local guides who helped them divide the selected community into the pre-determined number of segments on the sample frame. In addition to determining the number of segments in each village, the Coverage Survey Builder (CSB) simultaneously generated List A and List B, based on an automatically determined and applied sampling interval. The survey team only visited households within the selected segment in the community.

Each segment was numbered, and each number written onto a piece of paper. Someone from the village was asked to randomly pick one number. That was the segment that was surveyed. Starting with the initial household, the team enumerated households as they followed a predetermined route through the segment (ignoring any structures that are not households).

3.3.4 Selection of households

In the selected segment, at the house or compound, the interviewers explained the purpose of the survey and obtained consent from the head of the household or another adult household member using a consent form. The survey team first performed a household census identifying all persons living in the household during the MDA and got the household information from the Household Head. For the coverage survey, only the eligible (SAC 5-14 Years) were interviewed. Thus, only household members that fell within this age category were included in the survey. However, information for young children (<10 years) was collected from their primary care givers or guardians.

3.4 Research team composition and roles

The study team was selected from individuals who were not involved in the MDA campaign. Seven enumerators with one supervisor per state were constituted for the study per State. Teams hired local guides to assist in finding villages and work with village

leaders to conduct segmentation. The representatives from State and LGAs Ministry of health did not partake in the survey, rather they were available as observers.

For quality control purposes, there was a designated survey coordinator from Sightsavers' team and a consultant, with overall responsibility for the conduct of the enumerators and team supervisors. Four supervisors were mobilized, and each state was assigned a supervisor. The supervisors and consultant spent time in the communities with each team to ensure the quality of the data being collected was standard.

3.5 Data Recording

A questionnaire form was completed for each household selected. The questionnaires were administered on Android phones using the CommCare survey application. Data from the app was automatically uploaded into the CommCare system. The de-identified data was downloaded and shared with the consultant for cleaning and analysis.

3.6 Data Analysis

Analysis was conducted to determine coverage (program and geographic) for the MDA campaigns and to compare this to the results reported from the school treatment register or health system records. To do this, 95% Confidence Intervals (CI) was calculated for the treatment coverage. Age and sex specific coverage was also determined.

3.7 Ethical approval & consent

Permission for the survey was obtained from relevant authorities. It was not expected that ethical approval was required, as this survey was part of the routine monitoring of the program activity and there was no harm to the individual taking part in the study. Verbal consent was obtained from every household head before commencing the interview. All information collected was anonymous and confidential. All electronic data was protected by a password.

3.8 Training and timing of survey

It was necessary to train all team members on the rationale of the coverage survey, the methodology, filling in the questionnaire using mobile phones, quality control of the survey and ethics and guidelines of conducting a survey in the community.

All enumerators and supervisors attended a training organized by Sightsavers. Topics covered included the following: purpose of the survey, sampling methodology, ethical considerations, questionnaire administration and safeguarding.

Training of survey teams and supervisors took place for two days in Kaduna, from August 16th – 17th, followed by field data collection for nine days, from August 21st – 29th 2019 in Sokoto, Kebbi and Kwara, while Benue was from September 3rd – 11th 2019.

Briefing of key staff from the State Ministries of Health (SMOH) was carried out ahead of the survey training. Selected LGAs and communities was shared with the State and LGA personnel prior to the time of the field data collection. This was to ensure the State validate the accessibility of the locations before the team gets to the field as well as to allow for proper planning of field data collection.

4. Results

4.1 Survey study population

4.1.1 Geographic Coverage

The survey was planned to be conducted in 300 clusters of 10 LGAs in four states. However, 28 clusters were not visited due to insecurity in Benue (6) State and inaccessibility due to flooding in Kebbi (5), Kwara (10) and Sokoto (7) states. Of the 272 clusters visited, MDA was conducted in 259 clusters representing 95% geographic coverage with range from 73% in Illela in Sokoto State to 100% in five LGAs: Oju and Vandeikya in Benue State, Birnin Kebbi and Ngaski in Kebbi State and Edu LGA in Kwara State (Table 2). A cluster was considered to be covered geographically, when at least one household in that cluster was reported to have been treated with PZQ or MBD during the last MDA.

Table 2: Geographical Coverage for PZQ/MBD Treatment

State	LGA	# Cluster Planned	# Clusters visited	# Clusters at least one person was treated	Geographic Coverage
Benue	Gwer West	30	27	26	96%
	Oju	30	30	30	100%
	Vandeikya	30	27	27	100%
Kebbi	Birnin Kebbi	30	30	30	100%
	Maiyama	30	27	25	93%
	Ngaski	30	28	28	100%
Kwara	Edu	30	22	22	100%
	Patigi	30	28	27	96%
Sokoto	Illela	30	30	22	73%
	Tambuwal	30	23	22	96%
Total		**300**	**272**	**259**	**95%**

4.1.2 Surveyed respondents

A total of 2,888 households were visited in the 272 clusters. The survey team administered questionnaires in 2,738 households excluding 150 households from the total household visited. The households excluded are, 20 that did not consent to participate,

42 were absent at the time of the visit and 88 households had no school age children. Although data were collected from these 150 households, the data were excluded from the analysis. The survey team interviewed 7,905 of the 7,952 school age children encountered during the survey as 48 children did not assent to participate in the survey (Table 3).

Table 3: Number of household and children by LGA

State	LGA	# Household visited	# Household interviewed	# Children in Household	# Children Interviewed
Benue	Gwer West	280	272	767	747
	Oju	305	299	731	725
	Vandeikya	311	305	709	708
Kebbi	Birnin Kebbi	300	288	1,073	1,073
	Maiyama	284	272	994	994
	Ngaski	333	285	818	809
Kwara	Edu	251	251	990	990
	Patigi	290	259	712	709
Sokoto	Illela	306	288	631	624
	Tambuwal	228	219	527	525
Total		**2888**	**2738**	**7,952**	**7,904**

The gender structure of the sampled population was 4,443 (56.2%) males and 3,461 (43.8%) females. There were fewer girls in all LGAs with the lowest (38.5%) in Patigi and highest (45.9%) in Vandeikya (Figure 1). Children attending koranic schools were not considered as enrolled in formal education. A total of 6,015 (76.1%) children were enrolled in formal school while 1,889 (23.9%) were considered non-enrolled. The

percentage enrolment ranged from 40.9% in Illela LGA, Sokoto State to 98.9% in Oju LGA, Benue State (Figure 2).

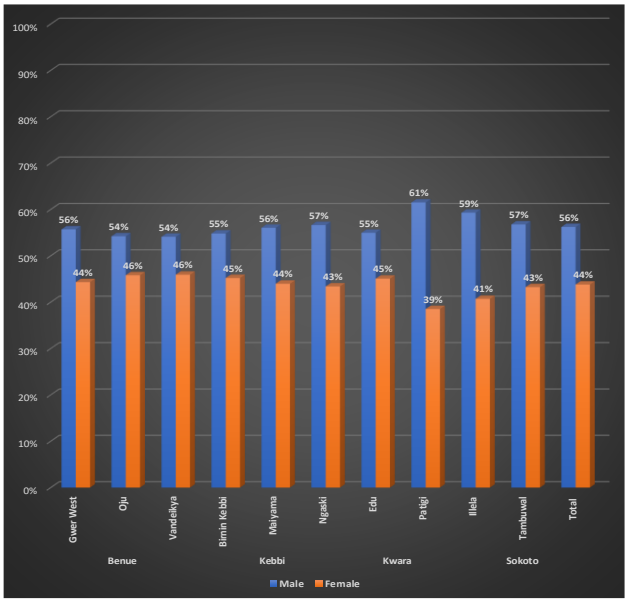

Figure 1: Gender distribution of the sampled children

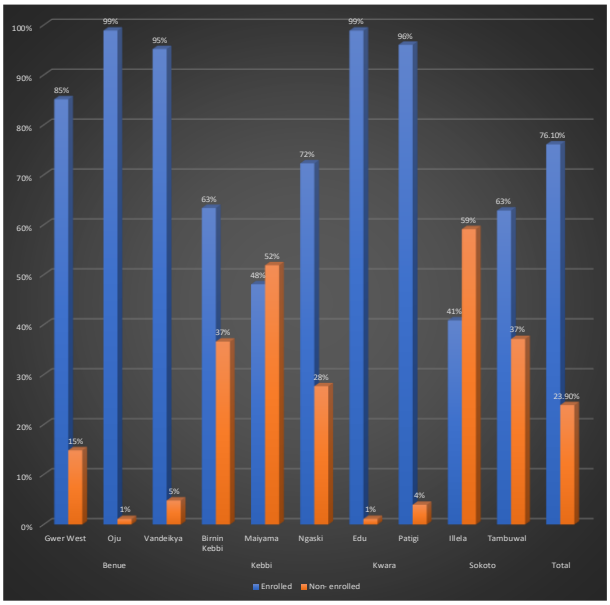

Figure 2: Distribution of the sampled children by enrollment

4.2 Survey Coverage of PZQ and MBD among SAC

All the 10 LGAs visited conducted MDA for SCH only using PZQ and two LGAs in Benue State (Gwer West and Vandeikya) conducted an integrated treatment of SCH and STH using PZQ and MBD. A total population of 7,904 children were interviewed and 36 children were excluded from the analysis as they could not remember taking the medicine. Of this population, 6,505 (82.7%) children confirmed to have swallowed PZQ. The reported administrative coverage for SCH ranged from 56.2% in Ngaski, Kebbi State to 96.4% in Illela , Sokoto State while the survey coverage ranged from 56.4% [95% CI: 41.5 - 70.2] in Illela to 96.1% [93.2 - 97.9] in Edu (table 4). The reported coverage for STH for both Gwer West and Vandeikya LGAs was 76.9% while the survey coverage was 76.2 % and 66.9% for Gwer West and Vandeikya respectively (table 5).

The reported coverage of four LGAs was validated by the survey. These LGAs are, two in Benue State (Gwer West - 79.6% and Oju – 79.6%); one each from Kwara (Patigi – 76.3%) and Sokoto (Tambuwal – 59.9%) as their coverages fell within the 95% confidence interval of the survey coverage as shown on table 4. Six LGAs reported coverages that were not validated: Four LGAs (Birnin Kebbi, Maiyama, Ngaski and Edu) had their reported coverages below the 95% confidence interval of the survey coverage, a case of under reporting, while two LGAs (Illela and Vandeikya) were above the survey coverage confidence interval, indicating over-reporting (table 5)

According to the survey report, seven LGAs attained the minimum WHO treatment benchmark of 75% while 3 LGAs Vandeikya 66.6%, Illela 56.4% and Tambuwal 68.7% were below the benchmark.

Two LGAs in Benue State conducted MDA for STH using MBD. The reported coverage in Gwer West was validated by the survey report and the survey report was also above the minimum 75% WHO benchmark. Vandeikya LGA was not validated and the survey reported coverage was below the WHO benchmark (table 5).

Table 4: Validated and Reported Programme Coverage of PZQ by LGA

State	LGA	Survey Pop (n)	Survey pop (n) that swallowed PZQ	Survey Coverage	95% Confidence Interval	Programme Coverage based on projected population	Treatment validation	Surveyed coverage reaching WHO threshold of ≥75%
Benue	Gwer West	736	586	79.6%	[64.8 - 89.3]	76.9%	Validated	Yes
	Oju	723	549	75.9%	[64.4 - 84.6]	76.9%	Validated	Yes
	Vandeikya	707	471	66.6%	[56.3 - 75.6]	76.8%	Not validated	No
Kebbi	Birnin Kebbi	1,073	994	92.6%	[85.1 - 96.5]	76.1%	Not validated	Yes
	Maiyama	993	891	89.7%	[79.1 - 95.3]	68.2%	Not validated	Yes
	Ngaski	805	752	93.4%	[84.4 - 97.4]	56.2%	Not validated	Yes
Kwara	Edu	987	949	96.1%	[93.2 - 97.9]	76.8%	Not validated	Yes
	Patigi	706	607	86.0%	[71.1 - 93.9]	76.3%	Validated	Yes
Sokoto	Illela	614	346	56.4%	[41.5 - 70.2]	96.4%	Not validated	No
	Tambuwal	524	360	68.7%	[54.5 - 80.1]	59.9%	Validated	No
	Total	**7,868**	**6,505**	**82.7%**	**[79.2 – 85.7]**			

Table 5: Validated and Reported Programme Coverage of PZQ by LGA

State	LGA	Survey Popn	Popn that swallowed MBD	Survey Coverage	95% Confidence Interval	Programme Coverage based on projected population	Treatment validation	Surveyed coverage reaching WHO threshold of ≥75%
Benue	Gwer West	736	561	76.2%	[61.4 - 86.6]	76.9%	Validated	Yes
	Vandeikya	707	473	66.9%	[56.2 - 76.1]	76.9%	Not validated	No

4.3 Survey Coverage of PZQ/MBD by Gender

The gender structure showed that in the ten LGAs where treatment with PZQ occurred 6,505 children were interviewed; 3,670 males and 2,835 females. The survey coverage of 82.342% [CI: 78.85 - 85.36] and 81.96% [CI: 78.14 - 85.24] was reported for male and female respectively, showing no significant difference (p=0.6848). This was similar in all LGAs except for Illela in Sokoto State where males had 60.16% [CI: 44.28 - 74.16] and females 49.21% [CI: 33.16 - 65.42], with a significant difference (p=0.0251) as shown in figure 3. A similar situation of no significant difference in treatment between male and female was also seen for STH MDA (p=0.7503) as demonstrated in table 6 below.

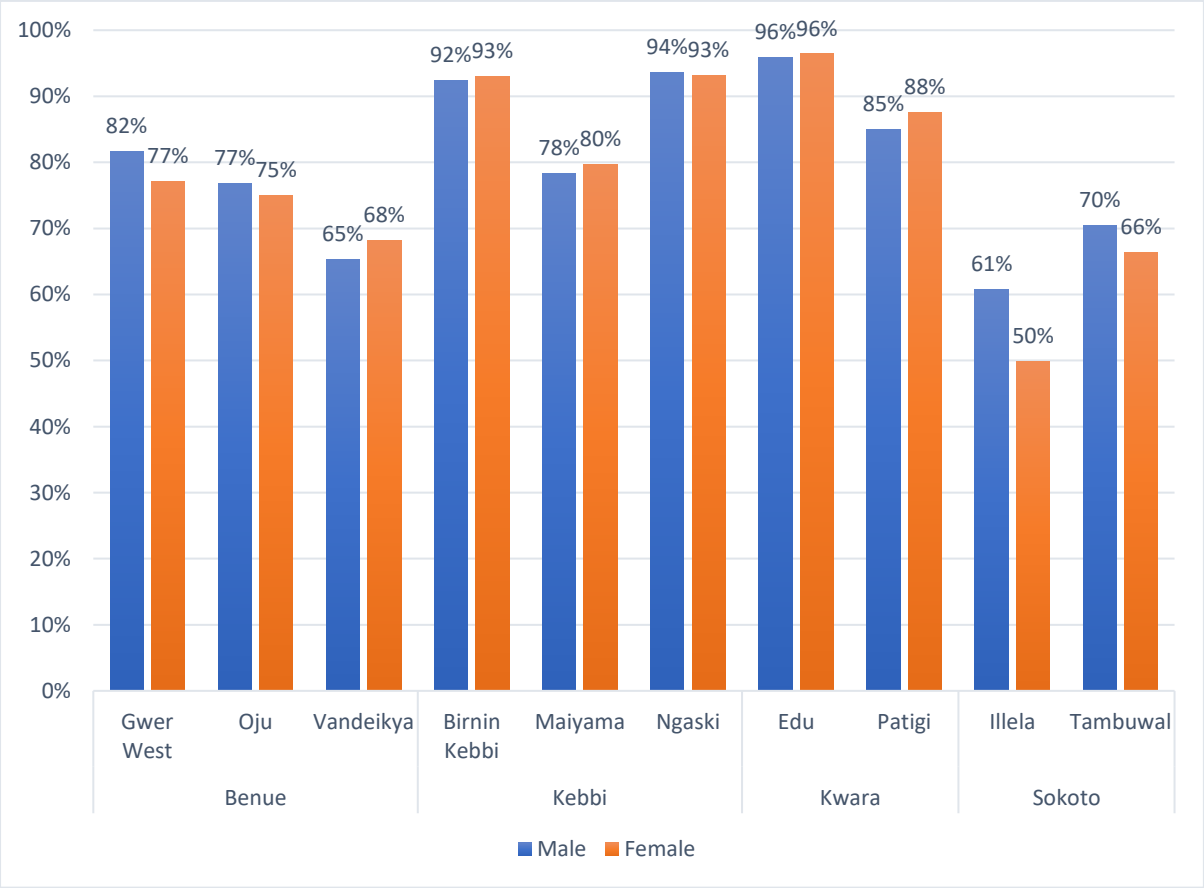

Figure 3: Survey Coverage of PZQ by sex in 10 LGAs

Table 6: Survey Coverage of MBD by Gender

State	LGA	Variable	Total Population	Population Treated	Survey Coverage (%)	P Values
Benue	Gwer West	Male	408	319	78.20%	0.2678
		Female	328	242	73.80%	
	Vandeikya	Male	383	251	65.50%	0.4631
		Female	324	222	68.50%	
Total		Male	791	570	72.10%	0.7503
		Female	652	464	71.20%	

4.4 PZQ/MBD Coverage Among Children Enrolled and Non-enrolled

The coverage of PZQ in all ten LGAs was higher among enrolled children than non-enrolled (Figure 4). The PZQ survey coverage in LGAs, was above the WHO minimum treatment benchmark of 75%, except Vandeikya in Benue State. This shows the programme is prioritizing school-based strategy over community delivery. This is evident in the low treatment coverage among the non-enrolled kids. Treatment of non-enrolled reached the 75% WHO benchmark in three LGAs, all of which are in Kebbi State. This state is also known to implement community wide treatment in some LGAs. The reach among non-enrolled was also low for MBD treatment (figure 5)

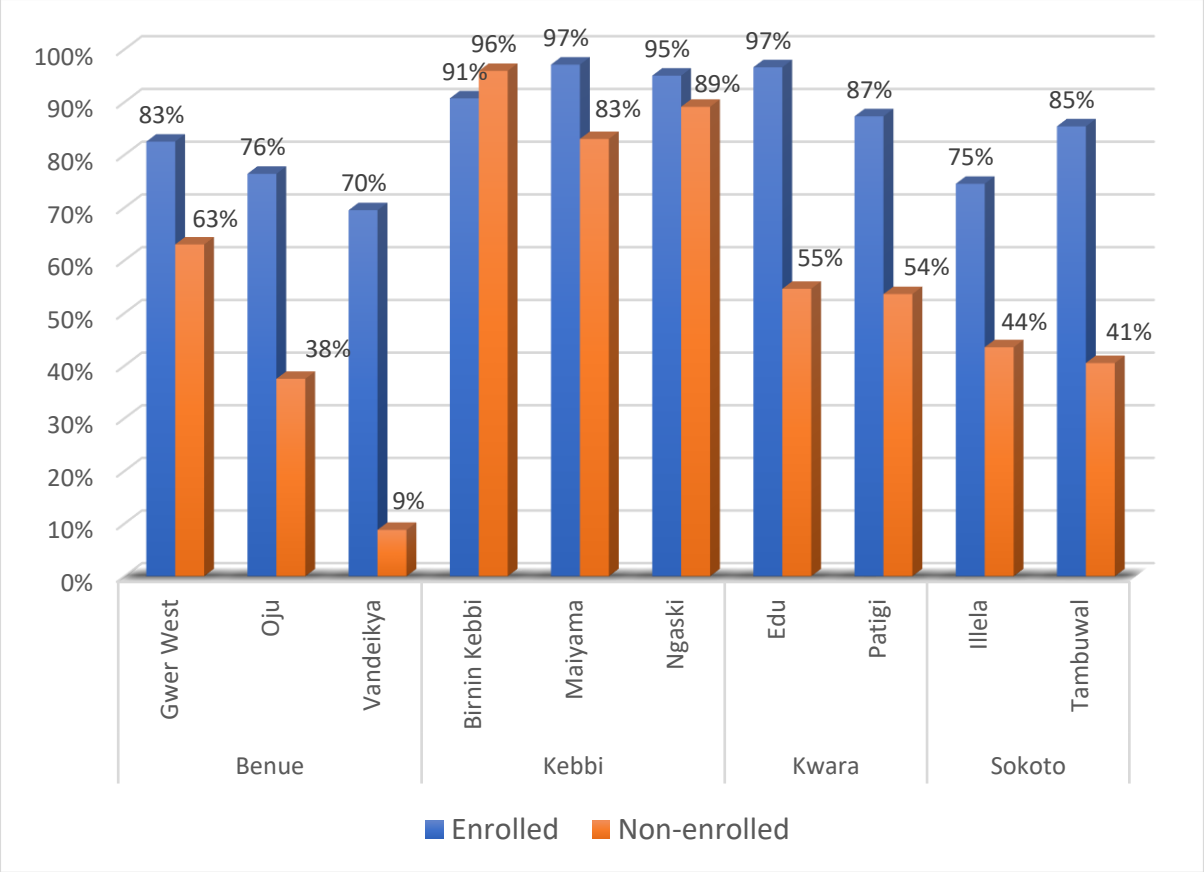

Figure 4: Praziquantel treatment coverage among enrolled and non-enrolled children.

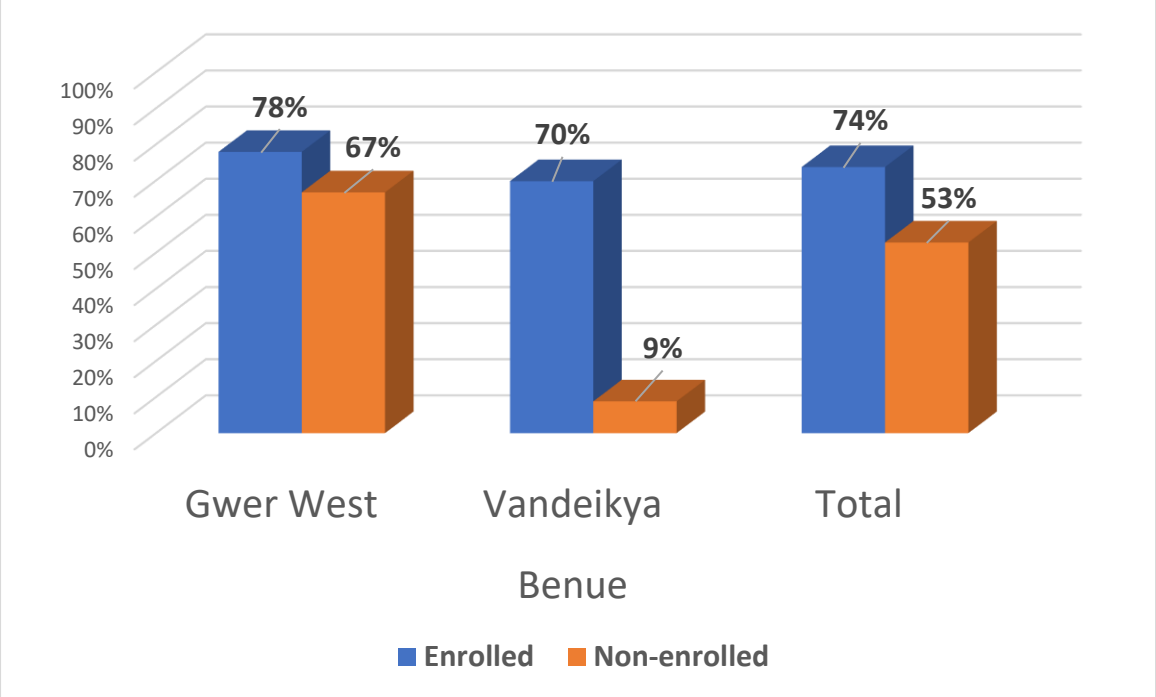

Figure 5: Praziquantel treatment coverage among enrolled and non-enrolled children

Analysis of the 1,363 children not treated with PZQ showed that 822 (60.3%) were enrolled and 541 (39.7%) not enrolled. The enrollment status of the non-treated children ranged from 14% in Maiyama LGA of Kebbi to 97% in Oju LGA, Benue State. Three LGAs in Kebbi and Sokoto recorded higher number of kids not treated among the non-enrolled (Figure 6). These states have low enrollment rates when compared others in the survey. A combination of both the school and community distribution platforms could significantly improve programme reach to enrolled and non-enrolled kids.

A similar pattern was observed among the 409 children not treated with MBD in the two LGAs where both LGAs had more untreated enrolled kids, compared to the non-enrolled (Figure 7).

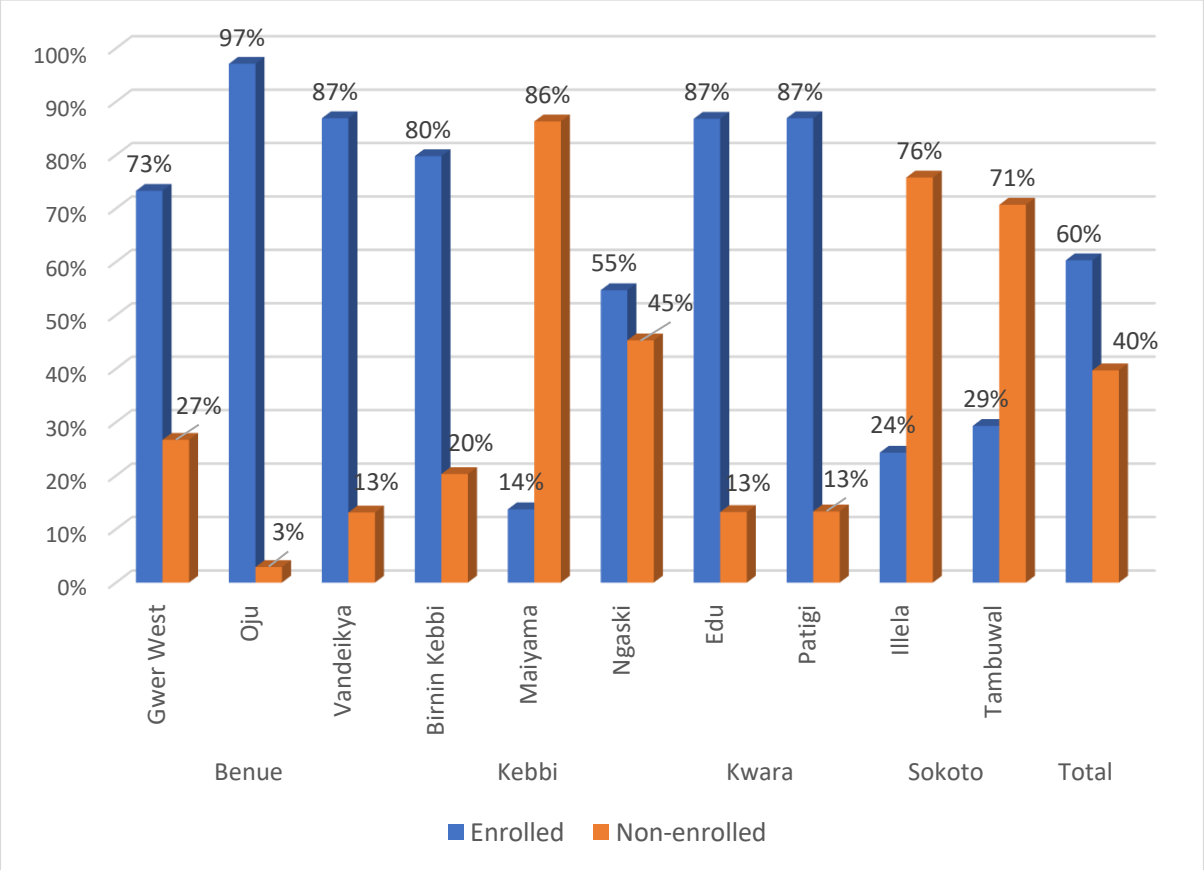

Figure 6: Enrolment status of non-treated SAC with PZQ

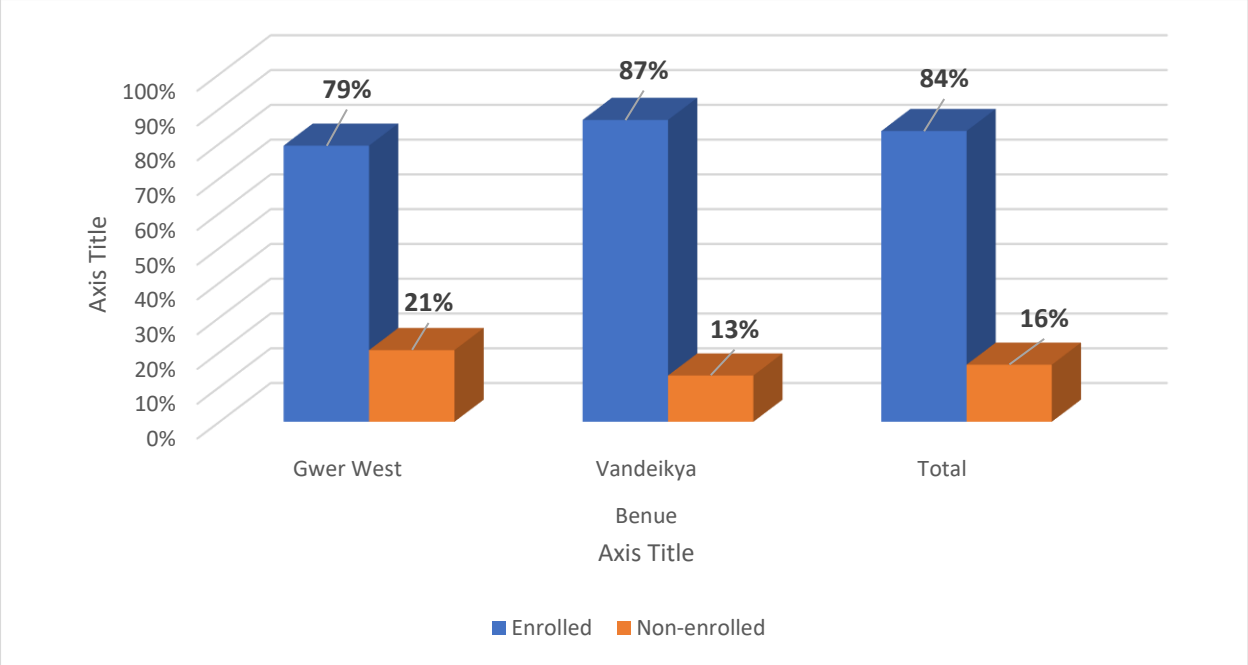

Figure 7: Enrolment status of non-treated SAC with MBD

4.5 Equity and Coverage

The economic status of respondents was measured using the equity tool specific to Nigeria. The national quintile was used as the reference point for the equity analysis because the children interviewed live in a mix of urban and rural areas. Most of the respondents live in the poor quintile (quintile 1 and 2) except in Kwara where majority of the respondents are in the two rich quintiles (quintile 4 and 5) as shown figures 8. Respondents living in the poorest quintile was high as 50% in Benue State to low as 7% in Kwara States. The treatment coverages across the quintile are similar (Figure 9). In terms of socioeconomic status there is equity in the implementation of the program. This may be connected to the fact that majority of the treatments were done in schools where kids from different wealth profiles converge.

The summarized Washington group questions on disability was used to measure level of impairment or disability of respondents. Disability for this survey was graded based on respondents admitting 'having a lot of difficulty' or 'cannot do at all' any of the key activities indicated in the Washington's group questions. The coverage for PZQ treatment among persons living with disability and those without disability in the four states was not significantly different: Benue 42.9% against 73.3% (p=0.069), Kebbi 100% against 91.7% p=0.761, Kwara 80% against 91.8% p=0.339 and Sokoto 80% against 61.3% p=0.228.

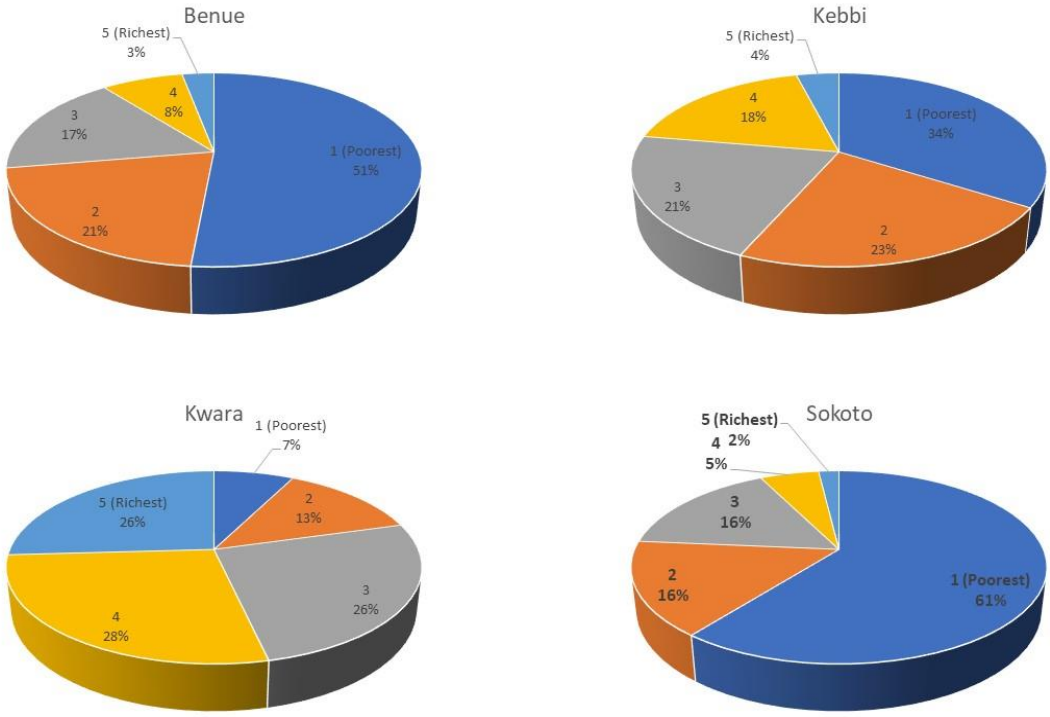

Figure 8: Wealth Status of the households by state

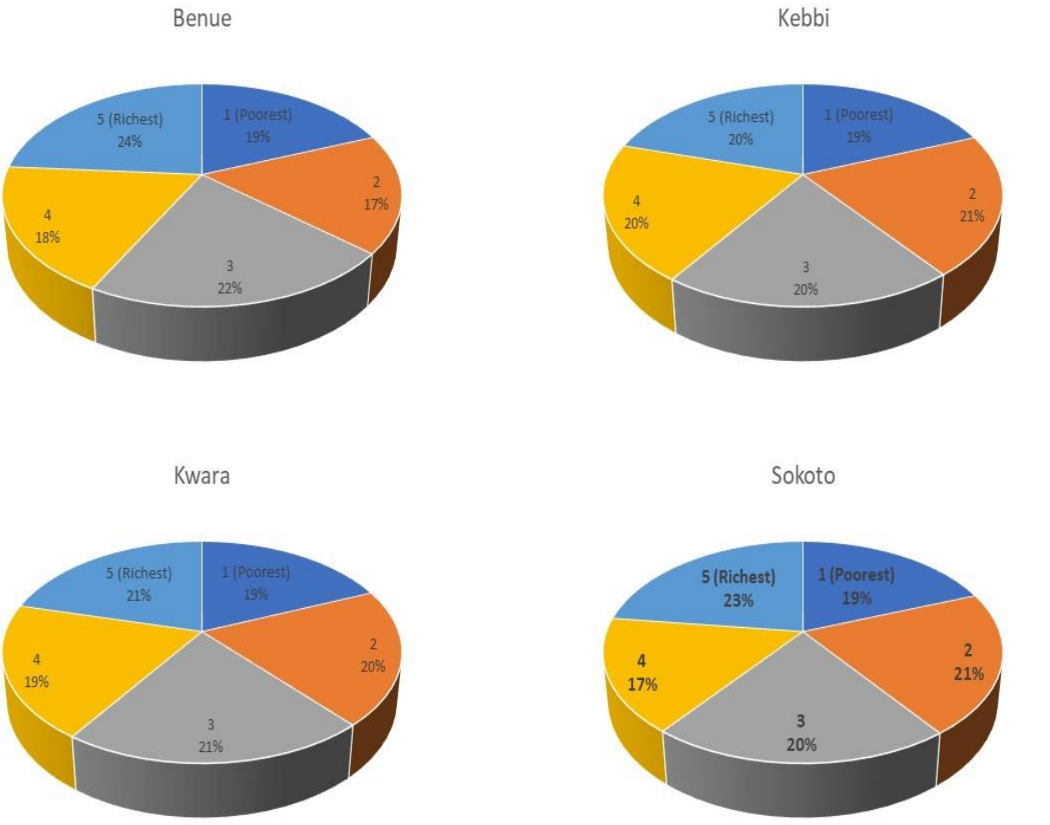

Figure 9 Treatment coverage by state and wealth status

4.6. Additional Parameters Measured

Other parameters measured during the survey included mode of sensitization and reason for not taking treatment. The most common social mobilization channel reported in all LGAs was teachers followed by the CDDs. Others were community leaders, family members, health staff, handbills and public address system in this order (Figure 10).

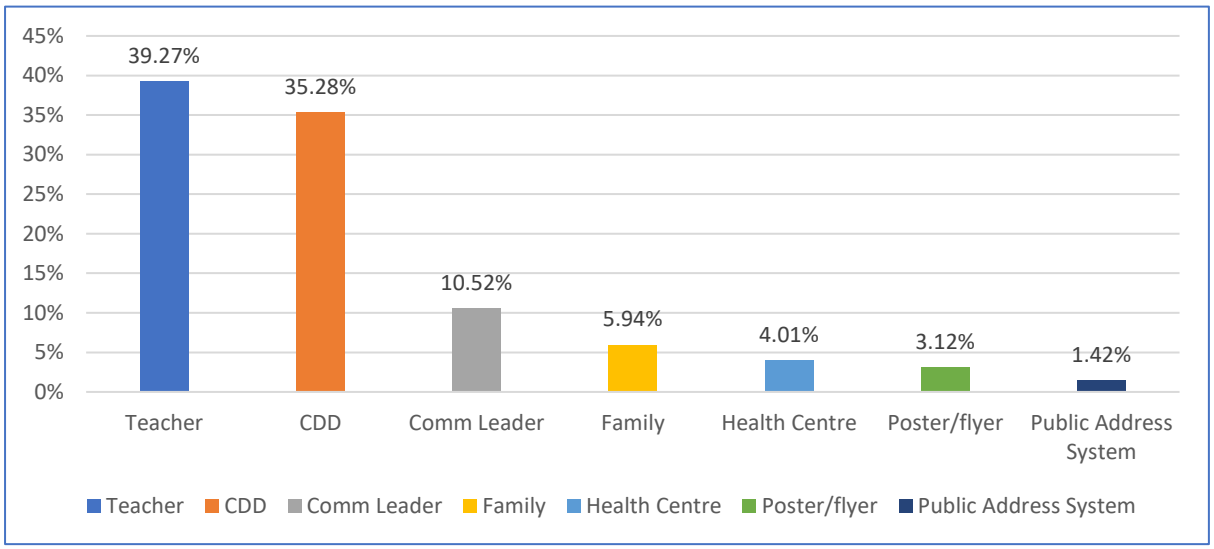

Figure 10: Reported methods of sensitization among those treated

Of the 1,341 children not treated with PZQ or MBD, 96.5% were not offered the drugs while 3.5% were offered but declined for various reasons. The reasons for not being treated included; Community Drug Distributor did not come (37.7%), too old (22.6%), did not know/trust the teacher/CDD (17.0%), fear of side effect (15.1%) and other reason (7.6%). The other reasons included not eating and parent did not consent.

The survey found 59.2% responses were self-provided and 40.8% was by proxy (28.7% were absent and 12.1% were too young to respond by themselves).

Based on the report of the survey both school-based and community platform were utilized to deliver the treatment. Of the 6,505 children that were treated for PZQ, 3,355 (51.6%) children responded they were treated within school premises; 3,069 (47.2%) said they were treated at home and 1.2% at the health facility.

5. Discussion:

Coverage surveys have been used as an alternative measure, particularly by immunization, malaria and PC-NTD control programmes for outcome monitoring. Survey participation was restricted to school age children (5-14yrs) of both sexes.
Some clusters could not be reached due to reasons that ranged from insecurity to inaccessible due to flooding in some communities at the time of the survey.
About 59.2% of responses from survey participants were self-provided, compared to 40.8% of proxy responses attributed to respondents being either young or absent. This is mainly because most respondents were too young and considering the culture of the area under study, most parents were not comfortable with people interviewing their kids. The timing of the survey may need to be modified to enable greater self-participation.
The most efficient mode of sensitisation was CDDs and teachers. This was probably so because the survey target was exclusively school aged children.

The survey coverage for seven LGAs was within the 75% minimum WHO benchmark for SCH/STH treatment of school age population except in three LGAs, Vandeikya, Illela and Tambuwal. Coverage validation for PZQ was achieved in Gwer West, Oju, Patigi and Tambuwal LGAs and Gwer West for STH. This implies reported coverage for these LGAs fell within the 95% confidence interval of the survey report. The discrepancies in the survey and reported coverage raises the need for a data quality assessment as there were cases of under and over reporting across several LGAs. The quality of record keeping at the level of CDDs will need to be improved thus emphasizing the need for; re-training, supportive supervision and data validation before reporting treatment figures.
The survey coverage reported for male and female showed no significant difference for both PZQ and MBD.

The national quintile was used as the reference point for the equity analysis. Majority of children fell in the poorest quintile and the lowest in the richest quintile in most states. The treatment coverage for both PZQ and MBD were similar across all quintiles. This may be attributed to the fact that most of the treatment were done using the school-based approach, where children from all wealth quintiles were represented.

The major reason for not taking PZQ and MBD was “not offered the drugs”. This often meant that treatment took place in the cluster but did not get to the household probably because there was drug shortage, absenteeism or CDDs did not distribute the drugs to most respondents. It could also mean that catch-up campaigns were not conducted both in schools and communities, to optimize programme reach to SAC by treating kids missed during MDA. Accessibility challenges might have contributed to this as well, especially at community level. To answer these questions the TCS process needs to be modified to collect additional qualitative information.

6. Challenges

- Survey field data collection was conducted in the heart of the rainy season when road conditions made some communities hard to access. Movement was challenging and hard to reach communities were attained with much difficulties.
- Some communities were not accessed in Sokoto due to security challenges; hence the team could not visit one LGA (Kebbe) for the survey.

7. Conclusion

This survey revealed that MDA for PZQ and MBD were conducted in ten and two LGAs respectively. Most LGAs reported survey coverage rates of ≥ 75%, thus indicated good compliance to treatment by programme beneficiaries and a functional MDA system put in place by the SCH/STH programme at national and state level.

8. Recommendations

- Survey supervisors should ensure home visits are conducted by enumerators when kids and parents are indoors, to enhance data quality and mitigate response bias;
- State and LGA teams should strengthen data reporting skills of frontline actors (nurses and CDDs) through training and supportive supervision during MDA;
- Sightsavers should conduct DQAs in Illela, Ngaski and Minyama LGAs, with respective disparities of 40, 37 and 21 points between reported and survey coverages, to identify potential data reporting challenges that might have contributed to this huge discrepancy;

- FMOH teams at state and LGA level should ensure mob-up campaigns are systematically conducted to address cases of absenteeism during MDA.
- Key variables such as drug supply, mode and time of MDA campaign at cluster level can influence programme coverage and should be included as additional questions in the questionnaire, targeting Key informants such as community leaders and CDDs who are most likely the custodians of such information;
- Conduct qualitative assessment through focus group discussion (FGD), to better understand reasons for the coverage disparity amongst kids in different wealth quantiles;
- State NTD programme offices should hold post MDA meetings with all stakeholders to review reported coverage, challenges and consider mop-up treatment in communities with poor coverage.

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Appendix 1: Selected Communities for the Survey

No	State	LGA	FLHF	Villages	Estimated # households	# Segments to be formed per Subunit
1	Sokoto	Tambuwal	Bagida	Kunga	162	3
2	Sokoto	Tambuwal	Bakaya disp	Dadin kowa	51	1
3	Sokoto	Tambuwal	Bakaya disp	Kaura	92	2
4	Sokoto	Tambuwal	Barkeji disp	Barkeji	131	3
5	Sokoto	Tambuwal	Bashire phc	Hulkili/masaurari	81	2
6	Sokoto	Tambuwal	Buwade disp.	Iko gari & kwalkwato	114	2
7	Sokoto	Tambuwal	Buwade disp.	Kanwuri	91	2
8	Sokoto	Tambuwal	D/daji disp	Ruggar shauda	101	2
9	Sokoto	Tambuwal	Faga phc	R/kolo	76	2
10	Sokoto	Tambuwal	Gambu disp	Matsari i	69	1
11	Sokoto	Tambuwal	Ganuwa disp	Ganuwa	77	2
12	Sokoto	Tambuwal	Goshe disp.	Goshe	212	4
13	Sokoto	Tambuwal	Gudun	Gudun	86	2
14	Sokoto	Tambuwal	Iloji disp	Audlijaki	69	1
15	Sokoto	Tambuwal	Kalgon disp	Kalgon magaji	92	2
16	Sokoto	Tambuwal	Kaya disp.	Kaya	194	4
17	Sokoto	Tambuwal	Maikada disp	Gwangwa yaya	112	2
18	Sokoto	Tambuwal	Maradi	Dan hili	187	4
19	Sokoto	Tambuwal	Maradi	Maradi bubba	344	7
20	Sokoto	Tambuwal	Modo	Modo/tajaye	89	2
21	Sokoto	Tambuwal	Nabaguda disp	Nabaguda	102	2
22	Sokoto	Tambuwal	Phc sanyinna	S/makera s/malle	266	5
23	Sokoto	Tambuwal	Phc sanyinna	Binchi	298	6
24	Sokoto	Tambuwal	Phc sanyinna	Sabon gari/kofar yama	322	6
25	Sokoto	Tambuwal	Buwade disp.	Kanwuri	211	4
26	Sokoto	Tambuwal	R/liman	S/kaura	194	4
27	Sokoto	Tambuwal	Romo laman	Romo	288	6
28	Sokoto	Tambuwal	Saida disp	Illela	88	2
29	Sokoto	Tambuwal	Salah	Salah	118	2
30	Sokoto	Tambuwal	Tandamare	Mashekari	67	1
1	Sokoto	Kebbe	Dukura disp	Dalijam	105	2
2	Sokoto	Kebbe	Fakku disp	Bamke dutsi	318	6
3	Sokoto	Kebbe	G.h kebbe	Kanwuri	214	4
4	Sokoto	Kebbe	G.h kebbe	Kurfi kebbe	214	4
5	Sokoto	Kebbe	Gadacce disp	Unguwar tsafe	127	3
6	Sokoto	Kebbe	Gadacce disp	Gadacce town	341	7
7	Sokoto	Kebbe	Girkau disp	Madatsa	121	2
8	Sokoto	Kebbe	Jabga disp	Gidan fulani	71	1
9	Sokoto	Kebbe	Jabga disp	Sabon gari gusga	242	5
10	Sokoto	Kebbe	Jigawa disp	Jigawa	308	6
11	Sokoto	Kebbe	Jigiri disp	Buhu da kwas	121	2

No	State	LGA	FLHF	Villages	Estimated # households	# Segments to be formed per Subunit
12	Sokoto	Kebbe	Karma disp	Mashekari	121	2
13	Sokoto	Kebbe	Kebbe up graded	Shiyar galadima	126	3
14	Sokoto	Kebbe	Kunduttu disp	Kawara/dutsun kaka	319	6
15	Sokoto	Kebbe	Kunduttu disp	Kundduttu	1034	21
16	Sokoto	Kebbe	Maikurfura disp	S/ alh manu	271	5
17	Sokoto	Kebbe	Maikurfura disp	Shiyar gandu	222	4
18	Sokoto	Kebbe	Nasagudu	Nasagudu	307	6
19	Sokoto	Kebbe	Phc kuchi	Kuchi tudun wada	301	6
20	Sokoto	Kebbe	Phc margai	Gauro	142	3
21	Sokoto	Kebbe	Phc margai	S/kanwuri margai	214	4
22	Sokoto	Kebbe	Rara disp	Bindanu	438	9
23	Sokoto	Kebbe	Rara disp	Rara	608	12
24	Sokoto	Kebbe	Sabon birni	Mai-angumi	122	2
25	Sokoto	Kebbe	Sangi disp	Tune	109	2
26	Sokoto	Kebbe	Sangi disp	Sangi town	214	4
27	Sokoto	Kebbe	Umbutu disp	Tabarma	121	2
28	Sokoto	Kebbe	Gwandi h/p	Dabagi	48	1
29	Sokoto	Kebbe	Ungushi disp	Shiyar liman	242	5
30	Sokoto	Kebbe	Ungushi disp	Shiyar ajiya	141	3
1	Sokoto	Illela	Amarawa	A/gangare	80	2
2	Sokoto	Illela	Ambarura	Ambarura	25	1
3	Sokoto	Illela	Buwade disp	Buwade b	82	2
4	Sokoto	Illela	D/kiliya	D/kiliya	130	3
5	Sokoto	Illela	D/s/gari	Maimasu	77	2
6	Sokoto	Illela	D/s/gari	Waiyaka	80	2
7	Sokoto	Illela	D/tsolawo	D/tsolawo	60	1
8	Sokoto	Illela	Damba	G/kutubu	40	1
9	Sokoto	Illela	Dan kadu disp	Dankudu a	71	1
10	Sokoto	Illela	Dango	Dango	204	4
11	Sokoto	Illela	Dango	Zango	97	2
12	Sokoto	Illela	G/bango	S/gari masawa	50	1
13	Sokoto	Illela	G/katta	G/katta/hura	35	1
14	Sokoto	Illela	Damba	Mashekari	60	1
15	Sokoto	Illela	Gudun gudun disp	Gudun gudun	102	2
16	Sokoto	Illela	Here	Harigawa	65	1
17	Sokoto	Illela	Illela	Illela(a)	140	3
18	Sokoto	Illela	Jema disp	Jema	107	2
19	Sokoto	Illela	Kalmalo	K/kware	90	2
20	Sokoto	Illela	Masasa	Masasa	90	2
21	Sokoto	Illela	Phc araba	Aroba	150	3
22	Sokoto	Illela	R/ja'o	S/gaga and g/kirya, rungumawa, yar tunga	45	1

No	State	LGA	FLHF	Villages	Estimated # households	# Segments to be formed per Subunit
23	Sokoto	Illela	Sonani	Mullela sonani	90	2
24	Sokoto	Illela	T/zango	G/fako	50	1
25	Sokoto	Illela	Tarke disp	Luguhuru, tualha	197	4
26	Sokoto	Illela	Tsangaladan	Mazauta	30	1
27	Sokoto	Illela	R/gatti	Zungure and malamawa	119	2
28	Sokoto	Illela	G/tudu	G/tudu	215	4
29	Sokoto	Illela	Garu	Garu	149	3
30	Sokoto	Illela	Lakoda	Lakoda	439	9
1	Benue	Oju	Mphcc ohuhu	Ikwata ohuhu	53	1
2	Benue	Oju	Phc akwuda	Ibiano	87	2
3	Benue	Oju	Phc akwuda	Uje	106	2
4	Benue	Oju	Phc arigbede	Arigede	75	2
5	Benue	Oju	Phc ebonda	Ebonda	258	5
6	Benue	Oju	Phc edee	Ogoaka	150	3
7	Benue	Oju	Phc edee	Okatokwe	120	2
8	Benue	Oju	Phc ete-adum	Ijege	103	2
9	Benue	Oju	Phc igbegi	Igbegi	279	6
10	Benue	Oju	Phc igede centre	Onyike	94	2
11	Benue	Oju	Phc ihigile	Ihigile	84	2
12	Benue	Oju	Phc ikachi	Omur	200	4
13	Benue	Oju	Phc obi ijegwu	Ikome	104	2
14	Benue	Oju	Phc obibagwu	Obibagwu	80	2
15	Benue	Oju	Phc oboru	Obegede	91	2
16	Benue	Oju	Phc oboru	Ogodo	580	12
17	Benue	Oju	Phc obusa	Obotu	225	5
18	Benue	Oju	Phc obusa	Obusa	372	7
19	Benue	Oju	Phc ochodu	Ihiejwo	242	5
20	Benue	Oju	Phc ochodu	Ochodu	457	9
21	Benue	Oju	Phc ochodu	Ogengeng	307	6
22	Benue	Oju	Phc ogege	Ezza-anwu	100	2
23	Benue	Oju	Phc ogege	Ogege	214	4
24	Benue	Oju	Phc ogori	Itator	125	3
25	Benue	Oju	Phc okile	Ochimode	100	2
26	Benue	Oju	Phc okoyongo	Ugburu	77	2
27	Benue	Oju	Phc okpenehi	Odubwo	179	4
28	Benue	Oju	Phc okpoma	Okpoma	100	2
29	Benue	Oju	Phc oye	Achawu	66	1
30	Benue	Oju	Phc oye	Oripwa	89	2
1	Benue	Gwer west	Chc naka	Atukpu	79	2
2	Benue	Gwer west	Chc naka	Tor leke	68	1
3	Benue	Gwer west	Fsp abian	Abian town	92	2
4	Benue	Gwer west	Mch jor	Mbaawa	79	2

No	State	LGA	FLHF	Villages	Estimated # households	# Segments to be formed per Subunit
5	Benue	Gwer west	Phc aba	Onmbaabena	87	2
6	Benue	Gwer west	Phc aba	Tse jombu	56	1
7	Benue	Gwer west	Phc agbe	Mbabija	89	2
8	Benue	Gwer west	Phc agbo	Yengev mbairiv	130	3
9	Benue	Gwer west	Phc agekpa	Orkurga	82	2
10	Benue	Gwer west	Phc aondona	Aondona town	87	2
11	Benue	Gwer west	Phc aondona	Tse abeh mbaakuha	80	2
12	Benue	Gwer west	Phc chile	Mbamanger	115	2
13	Benue	Gwer west	Phc jimba	Jimba town	69	1
14	Benue	Gwer west	Phc koti akpough	Akpough	130	3
15	Benue	Gwer west	Phc kpelan	Shomgbake	80	2
16	Benue	Gwer west	Phc kwashon	Tse-ushi	141	3
17	Benue	Gwer west	Phc mbaagav	Tse-tsavhembe	76	2
18	Benue	Gwer west	Phc mbaakem	Mbasase	150	3
19	Benue	Gwer west	Phc mbaier	Mbadya	88	2
20	Benue	Gwer west	Phc mbaier	Mbamondu	92	2
21	Benue	Gwer west	Phc mbalosu	Mbalosu town	135	3
22	Benue	Gwer west	Phc mbashija	Bunaka	100	2
23	Benue	Gwer west	Phc mbashija	Tse akaa	89	2
24	Benue	Gwer west	Phc new nigeria	Ibete	50	1
25	Benue	Gwer west	Phc nyadafa	Igba/mtan	70	1
26	Benue	Gwer west	Phc orawe	Orawe	142	3
27	Benue	Gwer west	Phc tongov	Zwatema	80	2
28	Benue	Gwer west	Phc ukusu adam	Mbaahume	115	2
29	Benue	Gwer west	Phc ukyongu	Ugbeleve	96	2
30	Benue	Gwer west	Phc yogbo	Yogbo	91	2
1	Benue	Vandeikya	Chc ageva	Mbagyar	154	3
2	Benue	Vandeikya	Chc bako ute	Mbaachira	998	20
3	Benue	Vandeikya	Chc bako ute	Mbaachira	998	20
4	Benue	Vandeikya	Chc bako ute	Mbashor	848	17
5	Benue	Vandeikya	Chc bako ute	Mbashor	848	17
6	Benue	Vandeikya	Chc gbagbaongom	Mbakwa	63	1
7	Benue	Vandeikya	Chc ikpo ikpo	Mbaagishi	317	6
8	Benue	Vandeikya	Chc ikpo ikpo	Mbaaposu	583	12
9	Benue	Vandeikya	Chc ikpo ikpo	Mbakunde ikpo	382	8
10	Benue	Vandeikya	Chc ikpo ikpo	Mbapwa	579	12
11	Benue	Vandeikya	Chc ikpo ikpo	Mbatyende	475	10
12	Benue	Vandeikya	Chc mbaagir	Mbakejime	50	1
13	Benue	Vandeikya	Chc mbaause	Mbaause	520	10
14	Benue	Vandeikya	Chc mbagbatse	Mbagbatse	130	3
15	Benue	Vandeikya	Chc taatihi	Kuragar	280	6
16	Benue	Vandeikya	Chc tsekpum	Mbagu	68	1

No	State	LGA	FLHF	Villages	Estimated # households	# Segments to be formed per Subunit
17	Benue	Vandeikya	Chc zor	Mbalaha	60	1
18	Benue	Vandeikya	Mch vandeikya	Central	149	3
19	Benue	Vandeikya	Mgds bako-ningev	Mbalam	143	3
20	Benue	Vandeikya	Nkst naa	Mbagbegba	156	3
21	Benue	Vandeikya	Phc gbem	Mbaagbande	500	10
22	Benue	Vandeikya	Phc gbem	Mbahile	450	9
23	Benue	Vandeikya	Phc gbem	Mbaikyon	650	13
24	Benue	Vandeikya	Phc gbem	Mbaikyon	650	13
25	Benue	Vandeikya	Phc gbem	Mbatsembe	520	10
26	Benue	Vandeikya	Phc ityeimongo	Mbakambe	95	2
27	Benue	Vandeikya	Phc natu	Mbaaboho	311	6
28	Benue	Vandeikya	Phc natu	Mbaachaku ii	298	6
29	Benue	Vandeikya	Phc tsar	Mbanyam	167	3
30	Benue	Vandeikya	Sev -av foundation	Mbakunde	77	2
1	Kebbi	Ngaski	Garin baka h/f	Akiku	91	2
2	Kebbi	Ngaski	Chufamini phc	Bakunya	72	1
3	Kebbi	Ngaski	B/yauri	Birnin yauri	141	3
4	Kebbi	Ngaski	Garin baka h/f	Danga	97	2
5	Kebbi	Ngaski	B/yauri	Dosso	131	3
6	Kebbi	Ngaski	Garin baka h/f	Garin baka	107	2
7	Kebbi	Ngaski	Garin baka h/f	Gonto	124	2
8	Kebbi	Ngaski	Gungun tagwaye h/f	Gungun tagwaye 11	128	3
9	Kebbi	Ngaski	Kabirha hf	Kabirba	114	2
10	Kebbi	Ngaski	Ulera	Kanshibawa	92	2
11	Kebbi	Ngaski	Gafara h/f	Kendawa	106	2
12	Kebbi	Ngaski	Gafara h/f	Kurgawa	104	2
13	Kebbi	Ngaski	Raishe hf	Kwayakwai	82	2
14	Kebbi	Ngaski	Lokon uba h/f	Lokon uba	92	2
15	Kebbi	Ngaski	Garin baka h/f	Magirka	88	2
16	Kebbi	Ngaski	B/yauri	Makucho	93	2
17	Kebbi	Ngaski	Mararraba hf	Mararraba	137	3
18	Kebbi	Ngaski	Njade hf	Ntade	102	2
19	Kebbi	Ngaski	Phc libata	Ruggan alh auta	68	1
20	Kebbi	Ngaski	Town dispensary	Sarkin wara 11	124	2
21	Kebbi	Ngaski	B/yauri phc	Takali	148	3
22	Kebbi	Ngaski	Tungani h/f	Tungani	126	3
23	Kebbi	Ngaski	Chufamini phc	Tungar garba	98	2
24	Kebbi	Ngaski	Kambuwa phc	Tungar jagaba	109	2
25	Kebbi	Ngaski	B/yauri	Tungar tanko	114	2
26	Kebbi	Ngaski	Garin baka h/f	Udungu	107	2
27	Kebbi	Ngaski	Town dispensary	Ung salkawa	132	3
28	Kebbi	Ngaski	Wawu h/f	Unguwar makera	114	2

No	State	LGA	FLHF	Villages	Estimated # households	# Segments to be formed per Subunit
29	Kebbi	Ngaski	Town dispensary	Unguwar sarkin wara 1	128	3
30	Kebbi	Ngaski	Mch wara	Yadi	105	2
1	Kebbi	Maiyama	Botoro disp	Botoro	1058	21
2	Kebbi	Maiyama	Dadin kowa disp	Dadin kowa	126	3
3	Kebbi	Maiyama	Giwatazo	Giwatazo	914	18
4	Kebbi	Maiyama	Giwatazo	Tsalibi	314	6
5	Kebbi	Maiyama	Kuberi	Unguwar sanwa	212	4
6	Kebbi	Maiyama	Kurya disp	Kurya	645	13
7	Kebbi	Maiyama	Kwatalo disp	Kwatalo arewa	145	3
8	Kebbi	Maiyama	Mch maiyama	Shiyar tasha	225	5
9	Kebbi	Maiyama	Mch mungadi	Mungadi	1411	28
10	Kebbi	Maiyama	Mch mungadi	Mungadi	1411	28
11	Kebbi	Maiyama	Mch mungadi	Hannun giwa	793	16
12	Kebbi	Maiyama	Mdg aida	Aida zawiya	175	4
13	Kebbi	Maiyama	Mdg gidiga	Ruggar gidiga	231	5
14	Kebbi	Maiyama	Mdg zucin	Kanaru	598	12
15	Kebbi	Maiyama	Phc a/kudu	K/kudu fada	423	8
16	Kebbi	Maiyama	Phc andarai	Andarai malamawa	394	8
17	Kebbi	Maiyama	Phc arausaya	Arausaya	658	13
18	Kebbi	Maiyama	Phc clinic	Ruggar shehu	85	2
19	Kebbi	Maiyama	Phc g/kure	Gumawa gabas	508	10
20	Kebbi	Maiyama	Phc g/kure	Makera	478	10
21	Kebbi	Maiyama	Phc gubba	Ruggar gubba	82	2
22	Kebbi	Maiyama	Phc kawara	Kawara	171	3
24	Kebbi	Maiyama	Phc mayalo	Ruggar dikko	32	1
23	Kebbi	Maiyama	Phc ruwan fili	Tungar mamman	209	4
25	Kebbi	Maiyama	R/fili disp	R/fili tullu	306	6
26	Kebbi	Maiyama	Ruwan fili disp	Inwala	436	9
27	Kebbi	Maiyama	Sabon sara disp	Sabon sara yamma	278	6
28	Kebbi	Maiyama	Town disp	Rinaye	1109	22
29	Kebbi	Maiyama	Zara dispensary	Nukki	134	3
30	Kebbi	Maiyama	Zara dispensary	Zara birni	1001	20
1	Kebbi	Birnin kebbi	Akwara hf	Akwara	759	15
2	Kebbi	Birnin kebbi	Ambursa	Ambursa	3271	65
3	Kebbi	Birnin kebbi	Asarara	Tewura	39	1
4	Kebbi	Birnin kebbi	B/tasha	Bayan kara	1551	31
5	Kebbi	Birnin kebbi	Daman h/f	Tungar hauni	370	7
6	Kebbi	Birnin kebbi	Danyaku h/f	Danyaku	215	4
7	Kebbi	Birnin kebbi	Gargariyo	Gargariyo	400	8
8	Kebbi	Birnin kebbi	Gulunbe	Gulumbe	1659	33
9	Kebbi	Birnin kebbi	Gulunbe	D/hadi	203	4
10	Kebbi	Birnin kebbi	Harasawa	Ung noma	262	5

No	State	LGA	FLHF	Villages	Estimated # households	# Segments to be formed per Subunit
11	Kebbi	Birnin kebbi	Illelaryari	Illelaryari	1681	34
12	Kebbi	Birnin kebbi	Junju hf	Junju village	531	11
13	Kebbi	Birnin kebbi	Makera	Makera	879	18
14	Kebbi	Birnin kebbi	Makera gandu h/f	M/gandu	1652	33
15	Kebbi	Birnin kebbi	Maurida	Maurida	840	17
16	Kebbi	Birnin kebbi	Mch badariya	Badariya	3361	67
17	Kebbi	Birnin kebbi	Mch birnin kebbi	Shiyaar fada	1421	28
18	Kebbi	Birnin kebbi	Asarara	Asarara	780	16
19	Kebbi	Birnin kebbi	Mdg karyo	Karyo	477	10
20	Kebbi	Birnin kebbi	Mdg kawara	G/fulani	588	12
21	Kebbi	Birnin kebbi	Mdg/alasani	T/buzaye	60	1
22	Kebbi	Birnin kebbi	Nufawa	Nufawa	476	10
23	Kebbi	Birnin kebbi	Phc gawassu	Gawasu	637	13
24	Kebbi	Birnin kebbi	Phc kardi	Kardi	1444	29
25	Kebbi	Birnin kebbi	Phc takalau	Takalau	1153	23
26	Kebbi	Birnin kebbi	Tarasa h. f	Tarasa	732	15
27	Kebbi	Birnin kebbi	Ujariyo hf	Ujariyo	498	10
28	Kebbi	Birnin kebbi	Ung. Kayi hf	Dukkowo	105	2
29	Kebbi	Birnin kebbi	Yamama hf	Yamama ketare	490	10
30	Kebbi	Birnin kebbi	Zauro h/f	T/buza	78	2
1	Kwara	Edu	Bhc gbale	Gbale	406	8
2	Kwara	Edu	Bhc/ ogudu	Ogudu	231	5
3	Kwara	Edu	Dhu lafiagi	Mayaki	1232	25
4	Kwara	Edu	Dhu lafiagi	Ndeji	1321	26
5	Kwara	Edu	Dhu lafiagi	Tsadza	1113	22
6	Kwara	Edu	Disp bacita township	Tunkun	281	6
7	Kwara	Edu	Disp belle	Yelwa	182	4
8	Kwara	Edu	Disp gbugbu	Gbugbu	320	6
9	Kwara	Edu	Disp kusomunu	Ndalati	56	1
10	Kwara	Edu	Disp mawokpan	Mawokpan	156	3
11	Kwara	Edu	Disp/ zambufu	Gedeworo	101	2
12	Kwara	Edu	H/p bindofu	Swasun	1621	32
13	Kwara	Edu	H/p boribo	Boribo	172	3
14	Kwara	Edu	H/p dzara	Ebangi	121	2
15	Kwara	Edu	H/p faigi	Tsaduko	152	3
16	Kwara	Edu	H/p lema	Lema	121	2
17	Kwara	Edu	H/p ndamaraki	Emir's palace	1422	28
18	Kwara	Edu	H/p ndamaraki	Kpotun	1423	28
19	Kwara	Edu	H/p ndamaraki	Ubandawaki	1421	28
20	Kwara	Edu	H/p ndeji	Ndeji/ dubba	506	10
21	Kwara	Edu	H/p sanchitagi	Chetta buro	134	3
22	Kwara	Edu	H/p todo	Todo	223	4

No	State	LGA	FLHF	Villages	Estimated # households	# Segments to be formed per Subunit
23	Kwara	Edu	Mat shonga	Shonga	1621	32
24	Kwara	Edu	Mat shonga	Shonga	1621	32
25	Kwara	Edu	Mat tsaragi	Tsaragi	2323	46
26	Kwara	Edu	Mat tsaragi	Tsaragi	2323	46
27	Kwara	Edu	Phc edogi dukun	Chewuru	61	1
28	Kwara	Edu	Phc gboro	Gboro 1-5	211	4
29	Kwara	Edu	Phc kanko	Patiokun	186	4
30	Kwara	Edu	Phc likpata	Likpata	421	8
1	Kwara	Patigi	Patigi iwc	Baba ruth/ extension	570	11
2	Kwara	Patigi	Patigi iwc	Emi ndeji	228	5
3	Kwara	Patigi	Patigi iwc	Nasarafu	144	3
4	Kwara	Patigi	Gadaworo h/p	Ekati	80	2
5	Kwara	Patigi	Gadaworo h/p	Lile	80	2
6	Kwara	Patigi	Gbaradogi hp	Ellah	82	2
7	Kwara	Patigi	Gbaradogi hp	Godiwa	143	3
8	Kwara	Patigi	Gbaradogi hp	Mawogi	133	3
9	Kwara	Patigi	Kpada mphc	Dobo	75	2
10	Kwara	Patigi	Kpada mphc	Gulugi	25	1
11	Kwara	Patigi	Kpada mphc	Kpada tifin	330	7
12	Kwara	Patigi	Kpada mphc	Rokan / dzakan	50	1
13	Kwara	Patigi	Lade cott. Hosp.	Efu lile	114	2
14	Kwara	Patigi	Lade cott. Hosp.	Koshaaba	140	3
15	Kwara	Patigi	Makun h/p	Gboke	178	4
16	Kwara	Patigi	Ndanaku disp.	Fulani camp	26	1
17	Kwara	Patigi	Rani h/p	Rani ramat	25	1
18	Kwara	Patigi	Rifun mat & disp	Tankpafu	125	3
19	Kwara	Patigi	Rogun chc	Ezhergiko	100	2
20	Kwara	Patigi	Rogun chc	Kasta	100	2
21	Kwara	Patigi	Rogun chc	Latayi	160	3
22	Kwara	Patigi	Rogun chc	Rogun	600	12
23	Kwara	Patigi	Rogun chc	Tutugi	28	1
24	Kwara	Patigi	Sakpefu phc	Esun dari	50	1
25	Kwara	Patigi	Sakpefu phc	Lata nna	286	6
26	Kwara	Patigi	Sakpefu phc	Sakpefu	300	6
27	Kwara	Patigi	Town disp	Manmasun	140	3
28	Kwara	Patigi	Town disp	Secretariate area	166	3
29	Kwara	Patigi	Town disp	Tsaduko	126	3
30	Kwara	Patigi	Town disp	Works dept patigi	100	2