

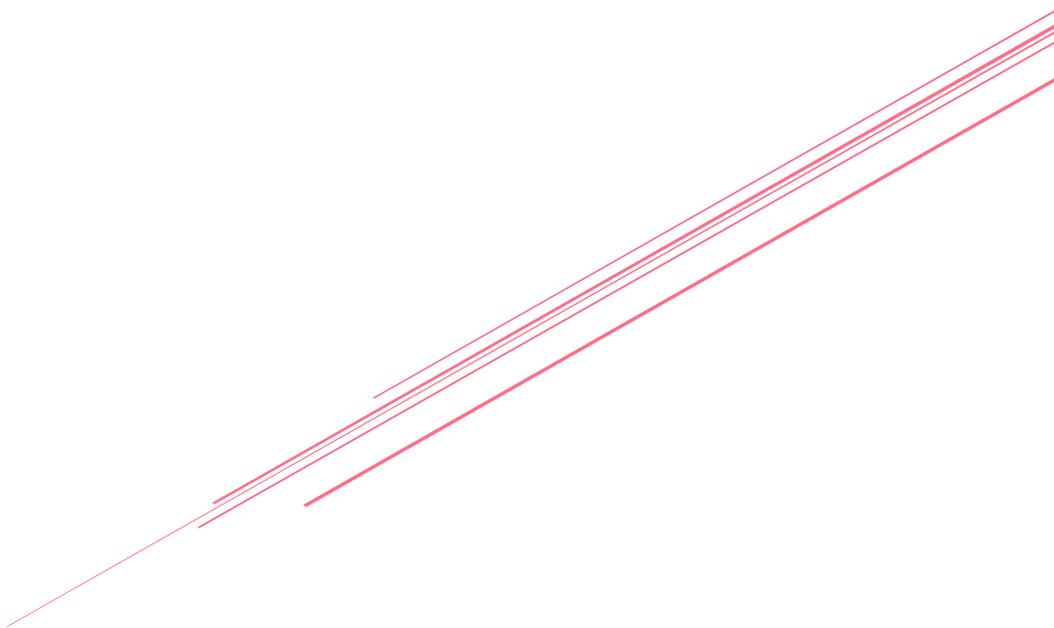
Evidence

Action



Deworm the  
World Initiative

School-based Deworming in  
Rivers State, Nigeria  
Process Monitoring and Coverage  
Validation Report, November 2018  
round



April 2019

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The contributions of all other program stakeholders to the generation of this report, including Infotrak Research and Consulting, are highly appreciated.

# Glossary

**FLHF.** Frontline health facility

**FMOH.** Federal Ministry of Health

**LGA.** Local government area

**MDA.** Mass drug administration

**NTD.** Neglected tropical disease

**PC.** Preventive chemotherapy

**SAE.** Severe adverse event

**STH.** Soil-transmitted helminths

**WHO.** World Health Organization

# 1.0 Executive Summary

In November 2018, Rivers State carried out its second round (implementation year 2, round 2) of school-based deworming of enrolled and non-enrolled children, ages 5-14 years, in nine of its 22 local government areas (LGAs) which have high endemicity for soil-transmitted helminths (STH). The state targeted 1,165 public and private primary and junior secondary schools.

To assess effectiveness of implementation and identify areas for improvement, Evidence Action designed data collection tools and a sampling method to observe and measure the quality of teacher training and deworming activities in the state, and assess the accuracy of treatment data reported by schools. Through a competitive selection process, Evidence Action recruited an independent consultancy firm, Infotrak Research and Consulting, to collect data from a sample of 26 teacher trainings and 50 schools participating in school-based deworming that were randomly sampled from 9 LGAs.

Prior to Deworming Day, the program trained teachers to administer the safe and effective deworming drug, mebendazole. Across the sample of 26 teacher training sessions, key materials were distributed in most trainings, with the treatment register distributed in 92%, and summary forms and teacher training handouts distributed in 88% of trainings. The average attendance from expected participants was 73%, and 87% of attendees showed up on time. Most of those who did not attend indicated that they were not informed about a change in training venue. Six of eight intended topics were completely covered in at least 70% of the monitored trainings. The average post-test score was 78% with a notable average increase of 20% from the pre-test.

On Deworming Day, teachers' adherence to key procedures in drug administration was considerably high, with children given the correct dosage and requested to chew the tablets in all schools monitored. In at least 85% of schools, monitors also observed

teachers providing health messages to children prior to treatment, recording treatment in the registers, and requesting children to chew the mebendazole tablet; all of these procedures are in line with program guidelines. Monitors reported side effects after treatment in three schools, with referrals to local health facilities made in all cases.

Awareness of the target age group and deworming date were high among interviewed parents (81% and 76% respectively), with 97% of parents indicating that they would send at least one of their children for deworming. Findings revealed that children, posters, and town announcers were the most effective means of reaching parents with Deworming Day information, and should therefore continue to be emphasized in future rounds.

Coverage validation was carried out five days after the mass drug administration (MDA) in two randomly selected LGAs of Abua–Odual and Ahoada East. The program reach<sup>1</sup> in both states was high with 92% of the eligible population in Abua-Odual and 89% of the eligible recipients in Ahoada East reached by the program. However, the disaggregation of this analysis by enrolment type revealed that in both LGAs, just over 60% of the non-enrolled population was reached (66% in Abua–Odual and 61% in Ahoada East). Emphasizing the deworming date and deworming benefits in sensitization messages are key recommendations in this regard. The surveyed coverage indicated that 87% of those offered the drugs in Ahoada East and 90% in Abua-Odual swallowed the drugs. However, neither LGA had its reported coverage within the confidence limits of its surveyed coverage, with the reported coverage in Abua-Odual as low as 42%, which suggests that the target number of children used in calculating the reported coverage based on head teacher reports may be overestimated or that head teachers are poorly aggregating treatment numbers. This calls for a review of the denominator used in computing the treatment rates as well as an assessment of data aggregation practices in both LGAs.

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<sup>1</sup> The “program reach” refers to the proportion of children interviewed who were offered the drug, regardless of whether it was ingested.

## 2.0 Introduction

Worm infections interfere with nutrient uptake, causing anemia, malnourishment, and impaired mental and physical development. These symptoms pose a serious threat to a child's health, education, and economic potential. Infected children are often too sick or tired to concentrate in school, or to attend at all. Parasitic worms also pose a massive threat to human capital, hindering schooling and economic development in parts of the world that can least afford it. School-age children harbor the highest intensity of infection from STH and schistosomiasis, and therefore the World Health Organization (WHO) and Nigeria's Federal Ministry of Health (FMOH) recommend large-scale school-based deworming to control these diseases. Evidence Action provides technical support to several Nigerian state governments working to eliminate the public health threat of worms through school-based deworming.

In November 2018, the second round of the 2018 state-wide school-based deworming took place in the nine LGAs of Rivers State which have high endemicity levels for STH<sup>2</sup>, out of 22 total LGAs. Enrolled and non-enrolled children ages 5-14 years received deworming drugs in both public and private primary and junior secondary schools. School teachers were trained to properly administer the safe and effective deworming drugs.

Evidence Action designed data collection tools and a sampling method to observe, review, and measure the quality and success of teacher trainings, community mobilization, sensitization, and Deworming Day activities. Infotrak was chosen through a competitive selection process to collect the data, which Evidence Action then cleaned, entered, and analyzed. The findings are presented in this report.

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<sup>2</sup> LGAs with 20% and above prevalence for STH are considered moderate – high endemicity LGAs and require preventive chemotherapy for all children age 5 – 14 years.

## 3.0 Methodology

Infotrak recruited a total of 59 monitors and 10 supervisors, using pre-defined criteria, to monitor a random sample of 26 teacher training sessions and 50 schools where deworming took place. Evidence Action trained monitors on November 8 and 9, 2018. The curriculum covered an overview of the NTD program with emphasis on school-based deworming, the basics of administering a questionnaire, paper and electronic survey tools, field logistics, and data collection protocols. Only participants who scored above 80% were selected for the monitoring exercise.

Prior to Deworming Day, teachers from all 1,165 targeted schools received a one-day training on mass drug administration (MDA) conducted by the LGA team (Education Secretaries, FLHF staff, NTD Coordinators) trained by the state master trainers. Evidence Action used stratified sampling to randomly select 26 of the 48 teacher training sessions, and 50 of the 1,165 schools in all targeted 9 LGAs where monitors observed of the quality of training and deworming implementation. The sample size was determined to ensure a 90% confidence level and 10% margin of error.<sup>3</sup>

Parents residing in areas around the selected schools were interviewed one day prior to deworming to gauge their awareness of the program. Monitors interviewed 268 parents: 140 parents of enrolled children and 128 parents of non-enrolled children.

On Deworming Day, monitors interviewed teachers regarding their plans for deworming, their treatment knowledge, and sensitization activities carried out in schools and communities. Monitors then observed the drug administration process to verify that the required procedures were followed. Following the treatment, monitors

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<sup>3</sup> A confidence interval of 90% calculates such that if the same population is sampled on several occasions and interval estimates are made on each occasion the resulting intervals would cover the true population parameter in approximately 90% of cases.

randomly selected and interviewed one parent, one teacher from the deworming team<sup>4</sup>, two enrolled children, and one non-enrolled child. In total, the monitors interviewed 14 parents (present during deworming), 50 teachers, and 123 children (23 non-enrolled and 100 enrolled) on Deworming Day. Monitors aimed to interview two consenting enrolled children per school and one consenting non-enrolled child per school, but because they were not always present on Deworming Day, monitors were only able to interview 23 non-enrolled children.

Within a week of the MDA, monitors conducted coverage validation with the aim of determining the program reach and surveyed coverage. To achieve this, a protocol based on the WHO guidelines for coverage validation in communities was developed, with the aim of covering schools as well. For this exercise, the sample was generated in two randomly selected LGAs and monitors interviewed 1,069 school-age children (SAC) in schools and 460 SAC in households.

**Table 1: Planned and actual sample sizes**

Monitoring activity	Total population	Target sample size	Actual sample size
Teacher training sessions	48	26	26
Total number of schools targeted for deworming	1,165	50	50
Parents interviewed before Deworming Day	-	300	300
Head teachers interviewed	-	50	50
Teachers interviewed	-	50	50
Enrolled children interviewed	-	100	100
Non-enrolled children interviewed	-	50	23
Parents interviewed (present at school on deworming)	-	50	14
<b>Coverage Validation</b>			
Number of school interviews	-	-	1,069
Number of household interviews	-	-	460

<sup>4</sup> The deworming team comprises two or more teachers trained and assigned to oversee the MDA; often a head teacher and a health teacher and any other teachers trained/sensitized within the schools to support MDA activities.

# 4.0 Results

## 4.1 Review of teacher training

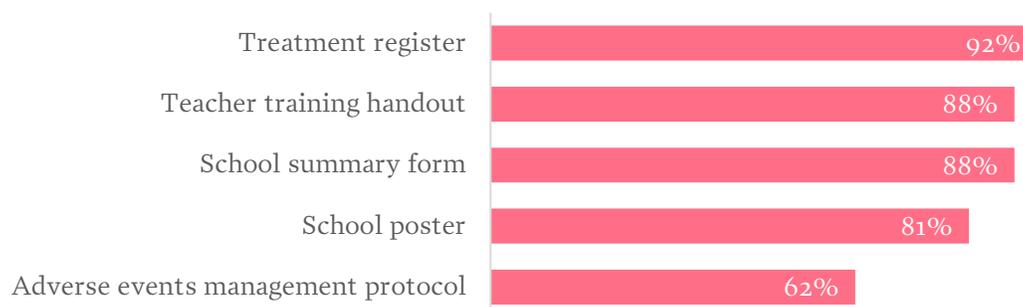
### 4.1.1. Attendance during trainings

The monitors visited 26 trainings, which had an average attendance at 73%<sup>5</sup>, based on register records. Monitors found that registers were available in all trainings, and that 87% of attendees arrived prior to start of the training.

### 4.1.2 Access to training materials

The treatment register and teacher handouts are key materials and were distributed in at least 88% of the sessions monitored. However, the adverse events management protocol was only distributed in 62% of observed trainings (**figure 1**). This is a key document with critical program guidance. The program team should pay extra attention to ensure its availability in future rounds.

**Figure 1: Materials given to teachers at teacher training sessions (n=26)**



### 4.1.3 Training topics covered

There were eight topics intended to be covered in teacher trainings, including: information on worms, the target population, drugs and materials used for deworming, drug administration steps, side effects, recording and reporting forms, roles and

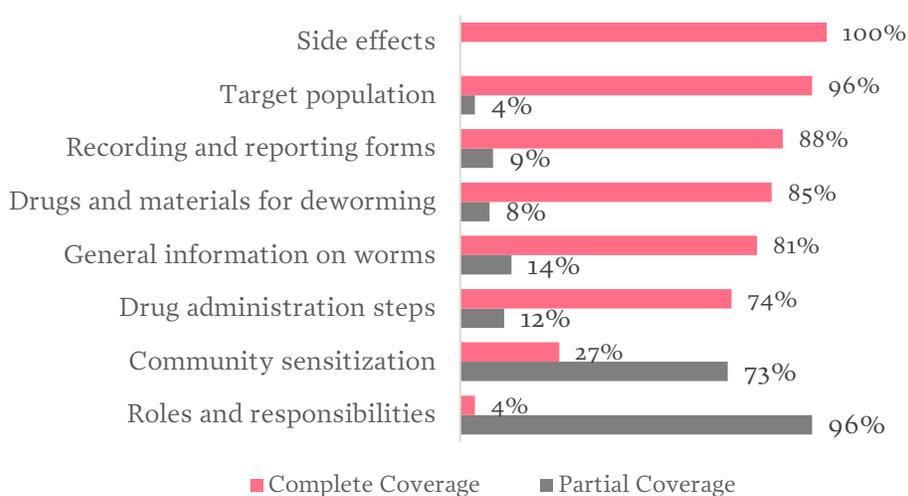
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<sup>5</sup> All the teachers that did not attend indicated that they were not informed about the change of the training venue.

responsibilities of various actors on Deworming Day, and community sensitization. Six of the eight topics were completely<sup>6</sup> covered in at least 70% of the trainings, and all messages under the “side effects” were topic covered in all (100%) trainings monitored. This is encouraging given the lower availability of the adverse event protocol and may have helped to balance a potential gap where that resource was missing.

However, topics on community sensitization were completely covered in only 27% of monitored trainings and roles and responsibilities of the different actors were only covered in 4% of the trainings (**figure 2**). Given the importance of these topics in the MDA exercise, trainers should place considerable efforts towards their coverage.

**Figure 2: Coverage of topics during trainings (n=26)**



#### 4.1.4 Training methods used

Trainers adopted several teaching methods to convey content to the participants. Lecture-based presentations were observed in 76% of trainings, followed by discussions in 54% of the trainings. Only one training employed role-plays, but because participatory learning is a powerful way to impart a sense of confidence and build implementers’ skills, trainers should be strongly encouraged to use role-play in future rounds.

<sup>6</sup> The term “completely” means that the trainer covered the prescribed content of the topic according to the training manual and presentations

Monitors reported that 92% of trainers administered a pre-test with the same proportion administering a post-test to assess knowledge transfer. Participants registered an average pre-test score of 58%, and average post-test score of 78%, indicating a 20% knowledge increase attributable to the training.

## 4.2 Deworming Day assessment

### 4.2.1 Preparedness for Deworming Day

Monitors visited 50 randomly sampled schools on Deworming Day to assess MDA procedures and interview the deworming team (two or more teachers assigned to oversee the MDA; often a head teacher and a health teacher) to assess their knowledge and capability to deliver the MDA. All head teachers indicated that either they or another teacher had attended a training in preparation for Deworming Day. From the head teacher interviews in 50 schools, 46% of head teachers reported having a significant<sup>7</sup> number of non-enrolled children in their area. The findings indicate that 42 (84%) of the 50 schools had made plans to deworm non-enrolled children. Of the four head teachers that gave a reason as to why they had no plans to deworm non-enrolled children, one indicated that non-enrolled children would not come while the other three reported that there were no non-enrolled children in the area.

### 4.2.2 Materials observed for deworming

Key deworming materials were observed in most schools, with the deworming tablets available in all schools (**figure 3**). Of the 50 schools observed, 49 (98%) had a treatment register and 92% were seen to be filling out all sections. The adverse events management protocol was, however, only present in half (50%) of the schools.

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<sup>7</sup> Monitors defined ‘significant number’ to the head teachers to mean more than the number of enrolled children actively coming to school in the area.

**Figure 3: Materials observed on Deworming Day at schools (n = 50)**



### 4.2.3 Drug administration procedures

Adherence to key MDA practices was noticeably high among the teachers, who administered the correct mebendazole dosage and requested children to chew rather than swallow the tablets in all sampled schools. However, washing hands prior to treatment was only observed at 46% of deworming stations (Table 2).

**Table 2: MDA procedures observed by monitors during drug administration (n=50)**

MDA procedure	Percentage
Teachers knew the correct dosage for mebendazole (one tablet).	100%
Teacher asked child to chew the mebendazole tablet.	100%
Teacher recorded treatments in the appropriate register.	94%
Teacher filled out all sections of the treatment register.	92%
The teacher had transferred the names from the class register to treatment register prior to the deworming exercise.	90%
Teacher asked if child was sick or under medication before treating.	90%
Teacher gave health education messages to children before treatment.	86%
Teachers ensured children washed their hands prior to treatment.	46%

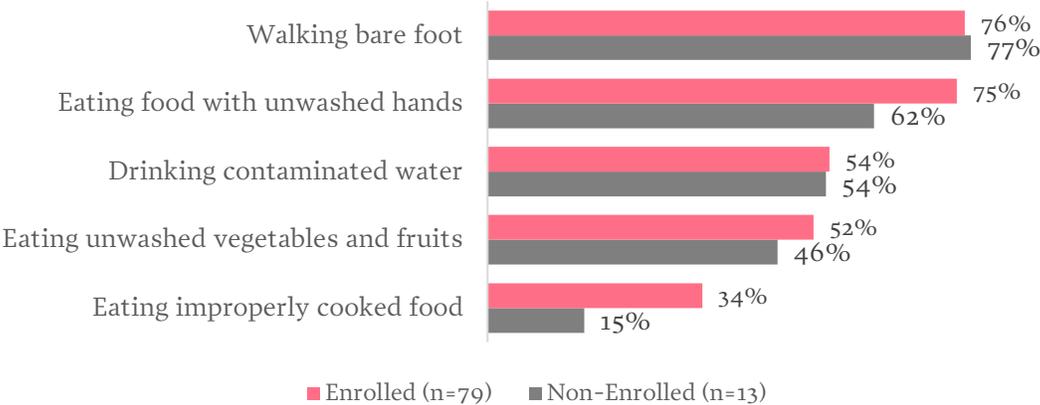
### 4.2.6 Managing side effects

On Deworming Day, monitors observed occurrence of side effects in only three of the 53 schools. Abdominal discomfort was noted in one of the schools, while vomiting was reported in the other two schools. In all three schools, authorities referred the affected children to local health facilities for effective case management.

### 4.2.7 Interviews with enrolled and non-enrolled children

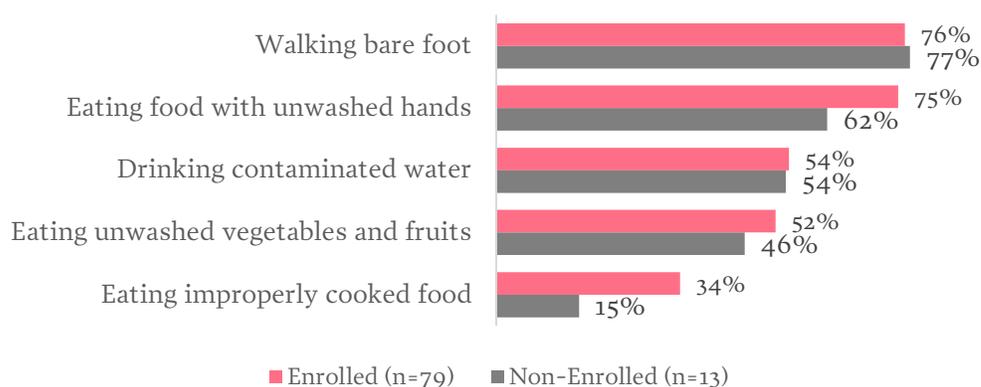
At the schools, monitors interviewed 100 enrolled and 23 non-enrolled children after deworming. Overall, more enrolled children (79%) could cite at least one way a person gets infected with worms, as compared to non-enrolled children (62%). Similarly, 82% of enrolled children could cite at least one means of preventing worm infections, as compared to 62% of non-enrolled children. Across both the enrolled and non-enrolled children, walking with bare feet and eating food with unwashed hands were the main ways cited through which one gets infected by worms (**figure 4**).

**Figure 4: Ways that children reported a person gets infected with worms**



**Figure 5** shows that across both the enrolled and non-enrolled children, wearing shoes and washing fruits and vegetables were the main measures children outlined through which a person prevents worm infection.

**Figure 5: Ways that children reported of preventing worm infection**



#### 4.2.8 Head teacher post-deworming interview

Upon completion of deworming, all interviewed head teachers described the Deworming Day as having been a success. Ninety-six percent (96%) reported having extra tablets left over. Of the schools with leftover drugs, 71% planned to keep these tablets for mop-up day and 25% planned to immediately return balances to the LGA<sup>8</sup>. Four percent (4%) of head teachers indicated that they would distribute the drugs among the teachers.

### 4.3 Community sensitization

One day prior to deworming, monitors visited 50 schools for interviews with head teachers to gauge their preparedness for Deworming Day and learn about measures taken towards sensitizing the community. Sampled schools visited for pre-deworming were different from the deworming day schools sampled, during the 2018 process monitoring. During these visits, 43<sup>9</sup> schools reported being prepared for deworming. Monitors also visited the community and spoke with 268 parents (both non-enrolled and enrolled) on their knowledge and preparedness for Deworming Day.

<sup>8</sup> Program strategy is to return drugs 5 days after mop-up.

<sup>9</sup> Militant clashes in Emohua LGA meant that six visited schools did not deworm. The head teacher in the other school that did not deworm was not aware of the deworming exercise.

### 4.3.1 Sensitization reported by head teachers

Eighty-six percent (86%) of the 43 head teachers indicated that a member of the school had reached out to sensitize community members about Deworming Day. Most indicated that this person was either a teacher (83%) or a student (69%).

### 4.3.2 Parents' knowledge on deworming

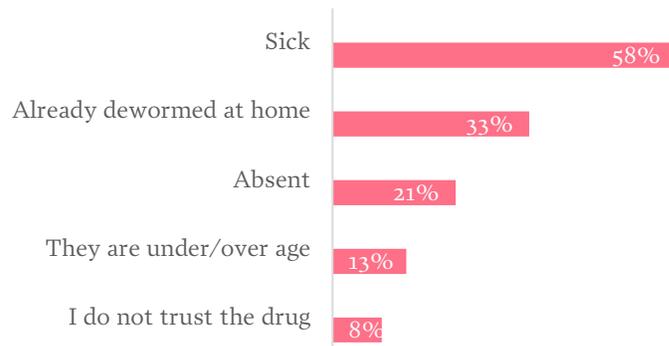
A total of 268 parents were interviewed by the monitors, including 140 (52%) parents of enrolled children and 128 (48%) parents of non-enrolled children, on aspects such as the date of deworming, target age group, and the type of worms being treated.

The majority (81%) of parents knew the target age group, though a higher proportion was noted among the parents of enrolled (87%) than non-enrolled children (72%). The overall proportions of parents knowledgeable about the correct deworming date and the type of worm being treated were 76% and 67% respectively. However when this analysis was split by parent type, the analysis found that the parents of enrolled children were generally more knowledgeable as regards both the deworming date (91% vs 59%) and type of worm being treated (70% vs 54%).

### 4.3.3 Parents' reasons for not sending children for deworming

An overwhelming majority (97%) of parents indicated that they would send at least one of their children for deworming, including 98% of parents of enrolled children and 95% of parents of non-enrolled children. Only 24 parents indicated that they would not send a child for deworming, with illness being the most common reason (**figure 6**).

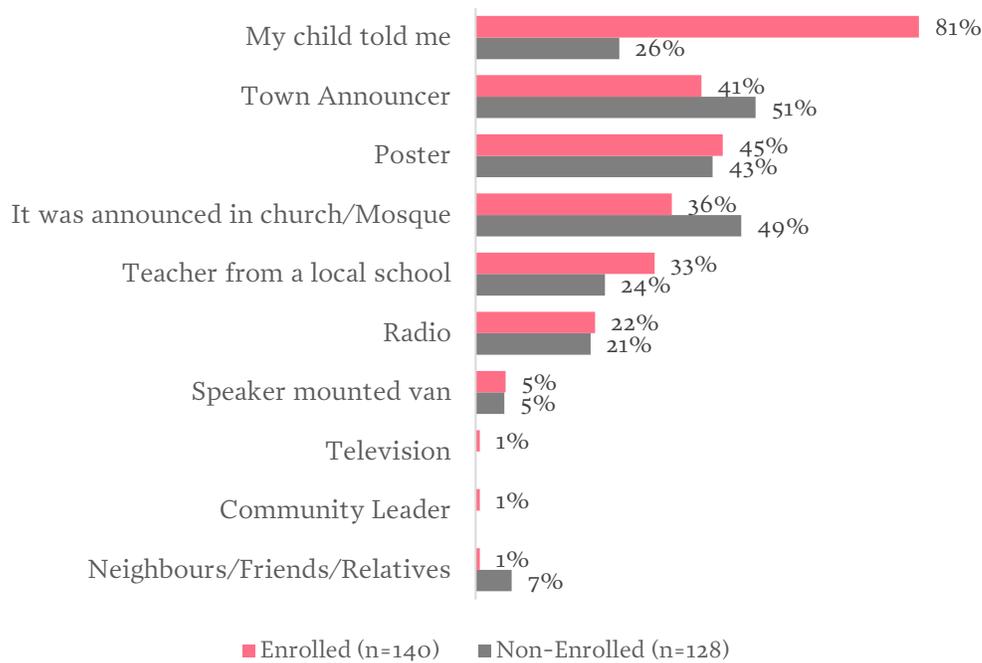
**Figure 6: Reasons for not sending children for deworming (n=24)**



#### 4.3.4 Medium used for community sensitization as reported by parents

The combined analysis for both sets of parents showed the child, poster, and town announcers to be the most effective means of reaching parents with Deworming Day information. **Figure 7** provides a breakdown of this analysis with parents' responses split by enrolment type. The findings indicate that most parents of enrolled children heard about deworming from their children (81%), while most parents of non-enrolled children heard about deworming from the town announcer (51%), followed closely by announcements in a place of worship (49%). The influence of the poster was relatively comparable across both sets of parents (**Figure 7**).

**Figure 7: Deworming information sources cited by parents of enrolled and non-enrolled children**



## 4.4 School hygiene facilities

Sanitation plays a major role in preventing intestinal worms. Monitors therefore observed the presence and functionality of toilets and handwashing facilities within the schools.

Only 39 of the 50 schools visited had a toilet structure. Among these, the ‘pour-flush’ structure was most common (70%) and about 33% of the toilet structures were functional<sup>10</sup>. Nearly four in ten schools (39%) lacked observable handwashing facilities. Considering that only 46% of children were observed washing hands prior to deworming, there is a clear need for the state and its partners to strongly encourage installation of handwashing facilities and promote a culture of handwashing within schools.

<sup>10</sup> Functional: Clean/somewhat clean, fresh stool in the pit, footpath, and door/some kind of privacy

## 4.5 Coverage Validation

Coverage validation was carried out in two randomly selected LGAs (Abua–Odual and Ahoada East) within Rivers State. The coverage validation was conducted with two main goals:

- Determine if the surveyed coverage (proportion of interviewed children who ingested the drug) met the WHO-defined threshold of 75%.
- Validate the reported coverage figures as provided by head teachers.

### 4.5.1 Methodology

Both enrolled and non-enrolled children were included in the sample for the coverage validation exercise; responses were gathered using a combination of school and household surveys. The sample size was determined per WHO guidelines using a probability proportionate to estimated size (PPES) approach. In this approach, subunits are first selected, which are sub locations divided into sections with a maximum of 400 households. Subunits are further divided into “segments,” or groups of 50 or fewer households. A sample of 30 subunits was selected from each LGA and in each, a segment was randomly selected. In the 30 segments, monitors administered a household survey to all at-risk persons within the visited households, with the aim to gather a representative perspective from the non-enrolled population.

At the end of the household survey administration, the field officer with the guidance of a parent of an enrolled child or village leader would request for information of the school that most children in the selected segment attend and then go to that school to administer a school survey. The proportion of household to school surveys was determined using LGA enrollment rates. In this case, the Abua–Odual enrolment rate of 70% was distributed among the 40 schools to be interviewed, while the Ahoada East enrolment rate of 89% was distributed among 31 schools to be interviewed. In each school, the sample was then further distributed equally per class level to select the pupils that would participate in the survey.

## 4.5.2 Results

Both household and school surveys were designed to determine if the drug was offered to the beneficiary and if it was, whether it was swallowed. Monitors asked why the child did not receive or swallow the drug, in order to understand any underlying barriers to coverage or compliance which can help improve the program design.

The “surveyed coverage” refers to the proportion of children interviewed who indicated that they swallowed the drug. The “program reach” refers to the proportion of children interviewed who were offered the drug, regardless of whether it was ingested. The “reported coverage” is the proportion of targeted children whom head teachers reported as having taken the drug.

The findings in **table 3** below indicate that both LGAs reached over 80% of the eligible population, with Abua-Odual posting a program reach of 92% while Ahoada East reached 89% of the eligible population. The surveyed coverage for both LGAs was also above the WHO threshold of 75%, suggesting a successful MDA in each location.

However, neither LGA’s reported coverage fell within the confidence limits of the respective surveyed coverage (though the reported coverage from Ahoada East is just 1% outside the confidence limits). The reported coverage as reported by head teachers of Abua-Odual is very low (42%) at nearly half of its surveyed coverage. This would indicate that the program reached less than half of its target population, but the surveyed coverage suggests that the actual treatment achieved should be over twice (90%) that reported by the head teachers. Thus, it is possible that the denominators informing the program targets are inaccurate and need to be revised, or that there are major challenges with data aggregation from the lowest to highest levels of reporting.

**Table 3: STH Coverage Validation Survey Results**

LGA		Program Reach			Surveyed Coverage			Reported Coverage	Denominator <sup>11</sup>
		Mean (%)	% Lower bound CI	% Upper bound CI	Mean (%)	% Lower bound CI	% Upper bound CI		
<b>Overall Findings</b>									
Abua–Odual		92%	90%	94%	90%	87%	92%	42%	614
Ahoada East		89%	87%	91%	87%	84%	89%	83%	915
<b>Disaggregation by enrolment status</b>									
Abua–Odual	Enrolled	93%	91%	95%	92%	89%	94%		570
	Non-Enrolled	66%	47%	81%	53%	35%	71%		32
Ahoada East	Enrolled	90%	88%	92%	89%	86%	91%		853
	Non-Enrolled	61%	45%	76%	52%	37%	68%		44
<b>Disaggregation by gender</b>									
Abua–Odual	Male	91%	87%	94%	88%	84%	91%		316
	Female	94%	90%	96%	91%	87%	94%		298
Ahoada East	Male	88%	84%	91%	87%	83%	90%		471
	Female	90%	87%	93%	87%	83%	90%		444

When this analysis was disaggregated by enrolment status, at least 90% of the enrolled children in both LGAs were reached, a finding comparable to the overall program reach. On the other hand, the program reach for the non-enrolled children was just above 60% in both LGAs. Taken together, the results indicate that the program mainly reached the enrolled population.

Further, the WHO recommendation of at least 75% of the population swallowing the drugs was achieved for only the enrolled (**Table 3**).

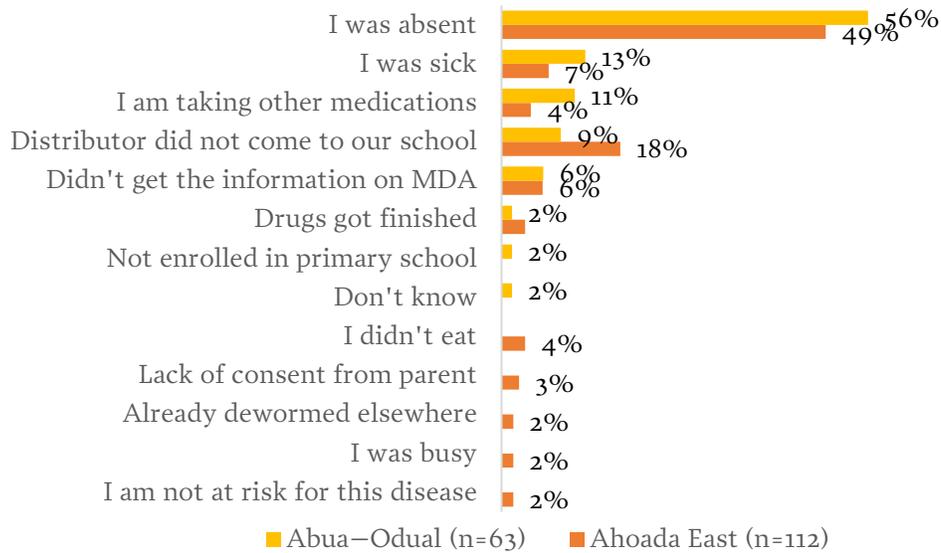
<sup>11</sup> Number of children interviewed

The breakdown by gender revealed no significant differences in both the program reach and surveyed coverage across both the male and female respondents.

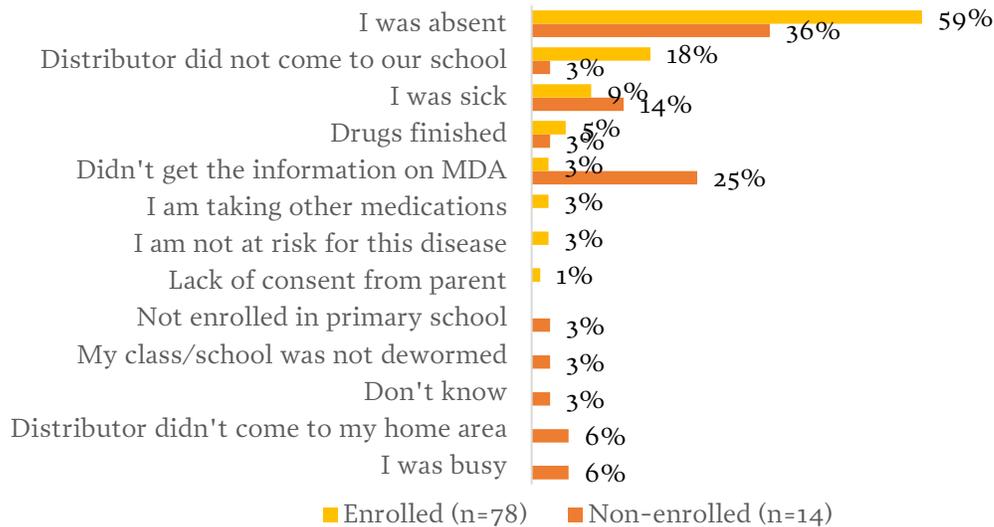
In both LGAs, most children who were not reached with the MDA reported that they were unavailable during the time of deworming with a higher proportion noted among the enrolled (59%) as compared to the non-enrolled (36%) (**Figure 8**). To achieve a higher program reach especially for the non-enrolled population, the program should emphasize the benefits of deworming and ensure that the deworming date is thoroughly conveyed in all media used.

**Figure 8: Reasons given by children for not receiving drug**

Reasons drug not given, disaggregated by LGA



Reasons drug not given, disaggregated by enrolment status



Of the two children that provided reasons for not swallowing drugs, one indicated that they feared the drug side effects while the other reported receiving insufficient information as regards the MDA.

### 4.5.3 Discussion

Coverage validation indicated that over 80% of the eligible population was offered the opportunity to take the tablet, with an equally high proportion of children in both LGAs reporting to have swallowed it.

Because the surveyed coverage in both LGAs is above the WHO threshold of 75%, this implies a successful MDA. However, given that the reported coverage for both LGAs were not validated by the surveyed coverage confidence limits, there is a need for the program to better understand whether the targeted number of children is accurate or requires revision. In particular, the data from Abua–Odual suggests that the program may be overestimating the target figure by nearly twice of the actual. It is also possible that the low reported coverage might indicate poor aggregation of treatment figures by head teachers, which could be rectified by further data management training in the future.

To address the low program reach of the non-enrolled population, emphasis of sensitization messages should be on the deworming date and deworming benefits.

## 5.0 Lessons Learned

There were many lessons learned in the second round of 2018 deworming in Rivers State, as outlined below.

### What worked well

1. The overall execution of the training cascade was successful. Six of the eight prescribed topics were covered in at least 70% of trainings. Key materials including the teacher training handouts, poster, and treatment register were distributed in at least 88% of observed trainings. Further, most (73%) of the expected participants attended and were on time (87%) for the trainings.

2. Adherence to MDA procedures was noticeably high across the schools monitored. Aside from handwashing, which was noted in only 47% of observed schools, adherence to all other key procedures was seen in at least 85% of monitored schools. This is commendable and suggests effective training sessions.
3. The three schools that reported side effects effectively managed all the occurrences, with referrals made in line with what is outlined in the SAE protocol.
4. Community sensitization efforts were strong, with at least 97% of parents (of both enrolled and non-enrolled children) indicating that they would send a child for deworming. Messages spread by word of mouth, poster and town announcers were key drivers in achieving this result.

## What needs to improve

1. Handwashing practices and facilities can benefit from better preparation in future deworming rounds. Handwashing was observed in less than half of schools visited (47%). Given the impact that handwashing has in preventing worm infection and transmission, health and education officials within the state should consider avenues of encouraging schools to improve in this area.
2. Based on the findings from coverage validation, there is plausible need for the program to revise its target figures; the surveyed coverage indicates that these targets may be high. This is especially true for Abua–Odual where the program may be overestimating the target number of children. Alongside this is the need to review the aggregation practices of the head teachers and implementing officials, who may be under-reporting the true treatment figures. Additionally, sensitization messages across all media particularly for the non-enrolled children where just over 60% of children were reached in both LGAs need to emphasize the deworming date and the deworming benefits.

## 5.3 Conclusion

The monitoring exercise set out to assess the effectiveness and quality of the activities during the deworming exercise as well as propose areas for remedy. The high-performing areas from this round of deworming included topic coverage at trainings, material distribution, and community sensitization. The coverage validation exercise drew attention to areas for improvement, including a need to focus on reaching the non-enrolled population as well as review denominators used to generate treatment coverage, as the findings indicate the possibility that the target population is significantly overestimated or that the treatment figures are under-reported.

Despite the challenges observed, this round of deworming largely met its objectives. Together with Rivers State, Evidence Action is committed to providing both technical and logistical support in the drive to eliminate worms as a public health problem among school-age children.