



**POST EVENT COVERAGE SURVEY OF
VITAMIN A AND DEWORMING INTERVENTION (VADI)
IN
NASARAWA STATE, NIGERIA.**



EXECUTIVE SUMMARY

Title	Post event Coverage Survey of Vitamin A and Deworming Intervention (VADI) in Nasarawa State, Nigeria
Objectives	<ul style="list-style-type: none"> • To validate administrative VAS and deworming coverage data • To identify factors associated with the receipt of VAS in Nassarawa state • To assess the contribution made by the social mobilization strategy on caregivers' awareness and participation during the August / September 2020 VADI in Nassarawa State
Methods	Post event coverage (PEC) survey was conducted within six weeks of the implementation of the August / September 2020 VADI in Nasarawa state, Nigeria. Thirty clusters (30) were randomly selected in Nasarawa using probability proportionate to size (PPS) sampling. In each cluster, 30 caregivers, 1 health worker (HW) and 1 community leader were interviewed.
Results	VAS coverage in Nasarawa among children 6-59 months of age was 93.0%; only 4.0% lower than state administrative coverage data (97.0%). Meanwhile, deworming coverage was found to be 91.1%, also similar to the administrative coverage of 97.0% reported by the state. Many caregivers heard about the VADI event from town announcers (63.3%), and community leaders (23.7%). Although there was good understanding of Vitamin A among health workers interviewed, detailed knowledge of key VAS messages was poor among caregivers and community leaders in Nasarawa State.
Discussion and Recommendations	The results highlight findings from the PEC survey conducted in Nasarawa State, Nigeria. Coverage of VAS and deworming were similar to administrative coverage reported by the state. The modified delivery model used (mainly door-to-door delivery) could be largely responsible for the high coverage. Town announcers were found to be effective channels for creating awareness about the VADI among caregivers, ultimately also leading to improved uptake of services by the beneficiaries. Continued use of the modified delivery model, especially in light of the COVID-19 context, increased funding through advocacy visit to key decision makers as well as continued capacity strengthening of key personnel such as health workers and town announcers would ensure that the high coverage achieved is sustained in subsequent VADI events.

ACKNOWLEDGEMENT

The PEC survey in Nasarawa State, Nigeria for the August / September 2020 VADI exercise for children 6-59 months was conducted by Helen Keller International (Helen Keller) in collaboration with the Nasarawa State Primary Health Care Development Agency (NSPHDA).

Helen Keller Nigeria takes this opportunity to express its gratitude to all those who, directly or indirectly, contributed to this survey.

Firstly, our sincere thanks to the GiveWell for their financial support towards the implementation of the Vitamin A distribution and Post Event Coverage Survey in Nassarawa state.

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We also thank all team leaders and enumerators who worked diligently and with close attention to detail in order to collect the data presented in this report.

ACRONYM GUIDE

CHEW	Community Health Extension Workers
COVID-19	Novel Coronavirus Disease 2019
EPI	Expanded Programme on Immunization
FANC	Focused Antenatal Care
FMOH	Federal Ministry of Health
GAVA	Global Alliance for Vitamin A
HF	Health Facility
HW	Health Worker
LLIN	Long Lasting Insecticide Treated Nets
LGA	Local Government Area
NSPHDA	Nasarawa State Primary Healthcare Development Agency
NBS	National Bureau of Statistics
NDHS	Nigerian Demographic and Health Survey
NGO	Non-Governmental Organization
NPHCDA	National Primary Health Care Development Agency
NPC	National Population Commission
MNCHW	Maternal New-born and Child Health Week
ORS	Oral Rehydration Solution
PECS	Post Event Coverage Survey
PHC	Primary Health Centre

PHF	Private Health Facility
SDG	Sustainable Development Goal
SPSS	Statistical Package for the Social Sciences
VA	Vitamin A
VAC	Vitamin A Capsule
VAD	Vitamin A Deficiency
VADI	Vitamin A and Deworming Intervention
VAS	Vitamin A Supplementation
VASD	Vitamin A Supplementation Distribution
WHO	World Health Organization

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1. INTRODUCTION

1.1 Background

Vitamin A Deficiency (VAD) is a major public health problem especially in poor societies and low-income countries. The effect of VAD leads to high rates of morbidity and mortality, particularly for children under the age of five. In Nigeria, the rate of VAD amongst children aged 6 to 59 months is high at 29.5%.¹ Based on the 2018 National demographic and Health Survey (NDHS) findings, the under-5 mortality rate has decreased since 2008, from 157 deaths per 1,000 live births to 132 deaths per 1,000 live births. Similarly, there has been a slight reduction in infant mortality, from 75 to 67 deaths per 1,000 live births.² However, there has been no noticeable change in the neonatal mortality rate over the same period.

In settings where VAD is a public health problem, bi-annual high-dose Vitamin A Supplementation is recommended by World Health Organization (WHO) in infants and children 6-59 months of age as a public health intervention³ to reduce child morbidity and mortality.

Vitamin A supplementation (VAS) is a cost-effective intervention that reduces the risk of all-cause child mortality by 24% in areas where VAD exists.⁴ It can also reduce morbidity from many common childhood conditions caused by VAD, such as xerophthalmia (a condition in which the eye is unable to produce tears) and night blindness by 68%.⁵

In Nigeria, the delivery of VAS has been integrated with other maternal and child survival interventions during the bi-annual Maternal, Newborn and Child Health Week (MNCHW) campaign. These campaigns are usually implemented in May / June and November / December of each year. Interventions such as VAS, deworming, focused antennal care (FANC), routine immunization, Zinc/Lo-ORS, nutrition assessment and education among others are delivered free-of-charge by trained health workers / volunteers at designated health facilities (HF) and fixed outreach posts during the week-long campaign.

¹ Imdad A et al. Vitamin A supplementation for preventing mortality and morbidity in children 6 months to 5 years of age. *Cochrane Database of Systematic Reviews*, 2010 (12): CD008524

² National Population Commission, MEASURE DHS, ICF International. Nigeria Demographic and Health Survey 2018 Report

³ WHO, Geneva, 2010. WHO Guidelines: Vitamin A Supplementation in Infants and Children 6 - 59 Months of Age

⁴ Beaton GH, Martorell R, Aronson KJ, Edmonston B, McCabe G, Ross AC, et al. Effectiveness of vitamin A supplementation in the control of young child morbidity and mortality in developing countries. ACC/SCN State-of-the-Art Series: Nutrition Policy Discussion Paper No. 13. Geneva: The United Nations, 1993

⁵ WHO, UNICEF. *Integration of vitamin A supplementation with immunization: policy and programme implications*. Geneva, World Health Organization, 1998 http://whqlibdoc.who.int/hq/1998/WHO_EPI_GEN_98.07.pdf, accessed 20 May 2011

Prior to the implementation of the MNCHW, advocacy visits for fund mobilization and trainings of health personnel are carried out at different levels. Various social mobilization activities such as community dialogues, town announcements, rallies, sensitization of religious leaders, airing of radio jingles, flag off e.t.c are also carried out at the community level to enlighten caregivers. These activities usually culminate in the mobilization of caregivers and eligible children to the health facilities / outreach posts to receive services.

Late 2019 / early 2020 saw the emergence of the new Coronavirus disease - COVID-19. This led to the World Health Organization (WHO) suspending all mass vaccination campaigns in March 2020. As a result, the MNCHW campaign was also suspended across all States in Nigeria. Following the WHO suspension, the Global Alliance for Vitamin A (GAVA) developed guidelines for the safe administration of Vitamin A in the context of COVID-19.⁶

In August / September 2020, with support from Helen Keller, Nassarawa state implemented a modified MNCHW event tagged VADI - Vitamin A and Deworming Intervention, following the GAVA guidelines. The VADI event used a mainly door-to-door approach to deliver Vitamin A and deworming to eligible children in their homes. In addition, controlled fixed posts were set up in a few designated health facilities - for caregivers who came with their children to access routine services, and special mobile teams of health workers were also sent out and charged with the responsibility of supplementing eligible children found in schools, playgrounds, markets, churches, mosques e.t.c.

1.2 Statement of the Problem

VAS coverage figures in Nigeria are based on administrative data collected during the implementation days using tally sheets. Administrative reporting usually takes up to 2 months to aggregate and reach national level for official coverage estimates, putting the accuracy of the data into question. Over the years, validation surveys have reported coverage that is lower than the administrative data. For example, in Katsina State, a VAS Post Event Coverage Survey (PECS) conducted by Helen Keller in collaboration with the Government showed that coverage for children 6-59 months of age during the 2014 round 2 VAS distribution was 43.5%, in contrast to the 80.0% tally sheet coverage reported by the state. The table below indicates the difference in coverage between tally sheet data and Post Event Coverage validation surveys in several states in Nigeria.

⁶ GAVA 2020: Administration of Vitamin A Supplementation for Preschool Aged-Children in the Context of Covid-19

Table 1: Difference in Coverage between Administrative (Tally Sheet) and PECS Data

FCT R1 2012		Akwa Ibom R2 2013		Benue R2 2013		Ebonyi R1 2014		Ekiti R2 2014		Katsina R2 2014	
Admin (%)	PECS (%)	Admin (%)	PECS (%)	Admin (%)	PECS (%)	Admin (%)	PECS (%)	Admin (%)	PECS (%)	Admin (%)	PECS (%)
66.6	66.9	97.0	45.8	92.0	50.7	106.0	56.6	81.0	66.3	80.0	43.5

Among the challenges affecting uptake of VAS is the poor awareness among caregivers about MNCHW campaigns. For example, PECS conducted in 2015 in Ekiti and Katsina states where VAS coverage was found to be 66.3% and 43.5% respectively, showed that majority of children who did not receive VAS (Ekiti 47.2%, Katsina 49.8%) did so because of lack of information about the campaigns.

Likewise, responses from the client exit interviews which are usually conducted during the MNCHW campaigns show that majority of caregivers are not often aware of the campaign, they just happen to bring their children for routine immunization.

Over the years, Helen Keller has supported some aspect of social mobilization across several states in Nigeria in order to increase awareness among caregivers, community participation and uptake of services during the MNCHW. Aspects supported include printing of IEC materials (banners, posters, job aids, stickers, VAS envelopes e.t.c), production and airing of radio jingles (in English and local languages) with key messages about the campaign, training and deployment of town announcers, sensitization of religious and community leaders and community dialogues. However, despite awareness creation, activities are usually not fully implemented due to inadequate funding of the campaign especially by the State and LGAs, and this often time also contributes to low coverage.

In early 2020, Helen Keller received a 3-year donation (2020 – 2022) from GiveWell to support the implementation of Vitamin A supplementation (VAS) among children 6 – 59 months of age in Nassarawa state during the bi-annual Maternal Newborn and Child Health week (MNCHW). However, the COVID-19 pandemic and the consequent suspension of all mass vaccination campaigns by WHO led to a delay in the implementation of the MNCHW. After the GAVA guidelines for the safe administration of Vitamin A in the context of COVID-19 were developed, the Nassarawa State Primary Health Care Development Agency (NSPHDA) sought to implement the first round of VAS distribution in May / June 2020, but could not because the State government did not release funds for the implementation. The first round of VAS distribution among eligible children for year 2020 was therefore further delayed.

Understanding the important role Vitamin A plays in strengthening the immune system and ultimately, in child survival, Helen Keller worked with the NSPHDA, to fully fund and implement a modified VAS distribution event, in line with the GAVA guidelines. The usual health facility-

based MNCHW delivery model was modified and instead, a Vitamin A and Deworming Intervention (VADI) event that delivered Vitamin A and deworming to eligible children via a mainly door-to-door approach was implemented. Trained health workers and community volunteers were paired into three (3) sets of health teams: door-to-door teams that went house-to-house supplementing eligible children with Vitamin A and deworming, fixed post teams that remained at the health facilities to supplement eligible children who were brought to the clinics for routine or sick-child visits, and special mobile teams who walked around the community supplementing children found in transit e.g. on playgrounds, markets, churches, mosques e.t.c. These health workers were screened daily (temperature checks) and observed all recommended COVID-19 prevention protocols (i.e. wearing medical face masks, observing physical distancing while interacting with caregivers and children, regularly sanitizing hands before and after administering the interventions).

The VADI was conducted from the 29th August, 2020 to the 2nd September, 2020. It was therefore necessary to conduct Post Event Coverage Survey (PECS) to validate administrative VAS and deworming coverage, determine the effectiveness of activities conducted prior to and during the distribution, and characterize children that were missed during the VADI.

1.3. Objectives of the Survey

The objectives of the PEC survey were to:

- a. To validate administrative VAS and Deworming coverage data.
- b. To identify factors associated with the receipt of VAS in Nasarawa State.
- c. To assess the contribution made by the social mobilization strategy on caregiver awareness and participation during the August / September 2020 VADI in Nasarawa State

2. METHODOLOGY

2.1 General Design

The PEC survey used a randomized, cross-sectional cluster design and was conducted within six weeks after the August / September 2020 VADI to ensure accurate recall by caregivers. To ensure selection of a representative sample of households, 30 clusters (communities) were randomly selected from the 1996 projected population census list of communities in Nasarawa State, using probability proportionate to size sampling (PPS). Sampling was done at the community level because this was the smallest unit for which there is population data from the National Bureau of Statistics (NBS).⁷

The methodology for the survey was adapted from the WHO/EPI cluster sampling methodology.⁸ Five teams of four (4) enumerators each were trained to collect data from caregivers in thirty (30) communities. After proper community entry, the map of each community was drafted by the teams with the help of a community member. Using a map of each community, each cluster (community) was then divided into four (4) quadrants. In each of the first two quadrants, eight (8) households were randomly surveyed while in each of the last two quadrants, seven (7) households were interviewed. Thus, giving a total of thirty (30) caregivers interviewed in each community.

To determine the households to be included in the survey, one of five starting points were chosen at random in each quadrant. Once the survey team reached each starting point, a bottle was spun to determine the direction that the survey team should proceed in. Once the direction was determined, the first household to be interviewed was randomly selected and data collection started from the selected household until the target number of surveys for each quadrant was completed. This process was repeated in each of the four quadrants of the cluster.

Households were considered eligible for the survey if they had a child 6-59 months of age at the time of the August / September 2020 VADI and the primary caregiver was present. If there was more than one eligible caregiver present, one was selected at random to participate in the survey. Likewise, if a caregiver had more than one eligible child, one was selected at random to be the focus of the survey. Children's ages were verified by health cards whenever possible. In cases where a health card was not available, caregivers were asked if they could recall the child's date of birth or otherwise the month and year of birth or a significant event that took place around the time of their child's birth. In the event that the age of a child could not be obtained either via health card, recall by the caregiver or using a significant event, the caregiver was not interviewed and the team continued to the next eligible household after thanking the primary caregiver.

⁷ 2006 Nigeria Census, National Bureau of Statistics

⁸ Immunization Coverage Cluster Survey-Reference Manual. World Health Organization, 2005

In addition to caregivers, one Health Worker (HW) and one village/community leader were surveyed in each cluster. The HWs, which included community health extension workers (CHEW), were selected based on their availability at the HF. However, the HW interviewed had to have been involved with the last VADI exercise in order to be eligible to participate. All data were collected with mobile phones using ODK-collect app and uploaded to the ONA platform for aggregation and analysis. Prior to beginning the survey, all enumerators participated in a two-day training in which one day was dedicated to training on collecting data using mobile phones. Specific measures were put in place to ensure data quality including pre-testing and adjusting the survey tools prior to data collection. All survey data were reviewed by the survey team leader prior to uploading to the ONA server.

2.2 Data Management and Reporting

Data collected from the 30 communities were uploaded from the smartphones for storage at a central server (ONA). The raw data were thereafter exported from the website and converted to SAV/SPSS format for ease of data analysis. The eligibility criteria for including caregivers in the survey was having a child or children aged 6 – 59 months at the time of the last August / September 2020 VADI in Nasarawa State.

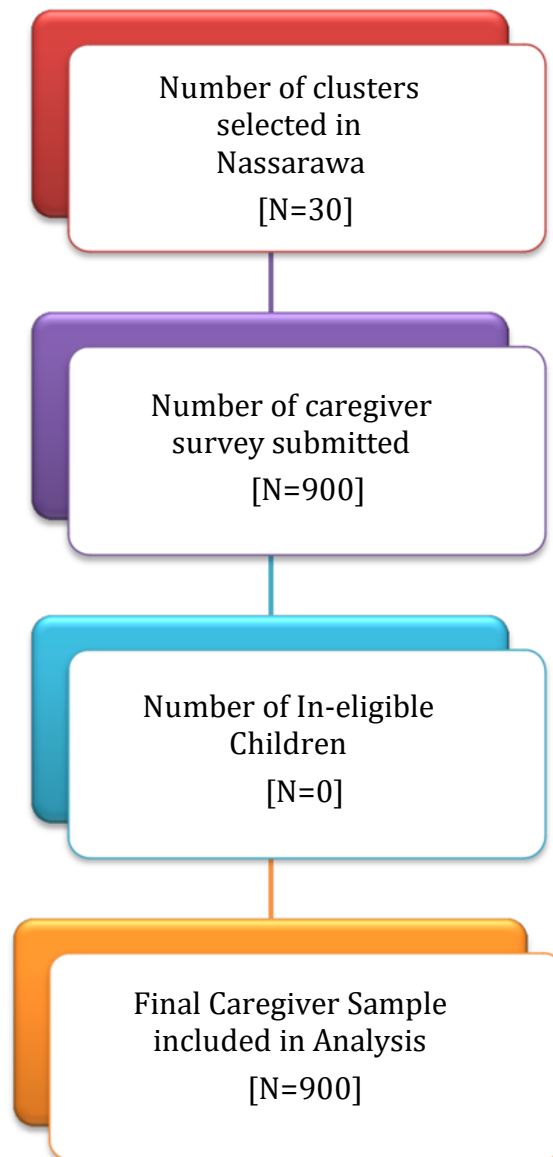
For children whose exact day of birth was unknown, an estimated date was arrived at by using the 15th day of the month and year of birth given by the caregiver. IBM SPSS Statistics 22 was used to compute frequencies and cross-tabulations in order to compare children who were supplemented and those who were not. A p-value of <0.05 was considered as significant. The 95% confidence interval was also calculated.

3. SURVEY FINDINGS

3.1 Enrolment and Final Sample

The final sample used for analysis comprised of nine hundred (900) caregivers, thirty (30) community leaders and thirty (30) health workers who participated in the last VADI in Nassarawa state.

Figure 1: Flow of Participants in Final Analytical Sample for Nassarawa State



3.2 Description of the Sample

Table 2 and 3 give an overview of the socio-demographic characteristics of the final sample included in the analysis. Majority of the children were aged 12- 59 months and more than half had birth certificates/health cards. Trading/business was the main source of income of the caregivers surveyed.

3.2.1 Descriptive Statistics of Children and Caregivers Surveyed

Table 2 provides a descriptive overview of the caregivers and children surveyed. A larger percentage (87.4%) of the children assessed fell within the 12 – 59 months age group, while only 12.6% were aged 6 – 11 months. There were more female (55.0%) than male children (45.5%) in the sampled population.

Most of the caregivers interviewed were the child’s mother (83.1%). More than a third of the caregivers (34.2%) fell within the 25 – 29 years age range, followed by the 30 – 34 years age range (26.4%). Over thirty percent (35.3%) of the caregivers had no form of education, while about a quarter (28.1%) had completed primary school. More than half of the respondents (56.8%) were Muslims.

Table 2: Descriptive Statistics of Children and Caregivers Surveyed		
Child Characteristics		
Age in months	(N = 900)	(%)
6-11	113	12.6%
12-59	787	87.4%
Gender		
	(N=900)	(%)
Male	405	45.0%
Female	495	55.0%
Health Card/Birth Certificate		
	(N=900)	(%)
No	329	36.6%
Yes	571	63.4%
Caregiver / Informant Characteristics		
Relationship with the Child	(N=900)	(%)
Mother	748	83.1%
Father	65	7.2%
Grandparent	31	3.4%
Sibling	21	2.3%

Aunt/Uncle	33	3.7%
Other (Compound Neighbour)	2	0.2%
Age (years)		
	(N=900)	(%)
< 20	38	4.2%
20–24	167	18.6%
25–29	308	34.2%
30–34	208	23.1%
>/= 35	179	19.9%
Level of Education		
	(N=900)	(%)
None	318	35.3%
Primary education	253	28.1%
Secondary education	237	26.3%
Tertiary education	85	9.4%
Postgraduate	0	0.0%
Others (Arabic / Islamic School)	8	0.8%
Religion		
	(N=900)	(%)
Christian	387	43.0%
Muslim	511	56.8%
Traditional	1	0.1%
No Religion	1	0.1%

3.2.2 Descriptive Statistics of Households

Table 3 provides an overview of the characteristics of households. An almost equal percentage of households were located in both rural (50.7%) and non-rural areas (49.3%). More of the caregivers (44.6%) indicated trading/business as their main source of income; followed by Farming (28.0%). Almost twenty percent (19.4%) was unemployed / stay-at-home.

The main source of drinking water for majority of the households was well / borehole (79.1%), while many used firewood (77.3%) as their main source of cooking fuel. About a third of the caregivers (37.3%) lived 5 - 10 minutes away from the PHC, while 26.2% lived 11 - 20 minutes away.

Table 3: Descriptive Statistics of the Household		
Type of the Area		
	(N=900)	(%)
Rural	456	50.7%
Non-rural	444	49.3%
Income Source		
	(N=900)	(%)
Farmer	252	28.0%
Trader or Business	401	44.6%
Civil Servant	33	3.7%
Artisan	13	1.4%
Fisherwoman or Fisherman	3	0.3%
Unemployed / Stay at Home / Student	175	19.4%
Livestock/ Cattle Rearing / Herding	15	1.7%
Teacher / Arabic Teacher	5	0.6%
NYSC	1	0.1%
Other	2	0.2%
Main Source of Drinking Water		
	(N=900)	(%)
Private pipe / tap	27	4.0%
Public pipe / tap	15	3.0%
River / Lake	133	14.8%
Well / Borehole	712	79.1%
Others (Bottled water / Sachet Water)	13	1.4%
Type of Household Toilet		
	(N=900)	(%)
Bush	210	23.3%
Pit Latrine	425	47.2%
VIP Latrine	127	14.1%
Water Closet System	138	15.3%
Primary Source of Cooking Fuel		
	(N=900)	(%)
Charcoal	96	10.7%
Electricity	1	0.1%
Firewood	696	77.3%
Gas	79	8.8%

Kerosene	28	3.1%
Distance of Household from Health Facility		
	(N=900)	(%)
< 5 minutes	117	13.0%
5 – 10 minutes	336	37.3%
11 - 20 minutes	236	26.2%
21– 30 minutes	118	13.1%
>30 minutes but <1 hour	59	6.6%
>1 hour	22	2.4%
Other (don't know or doesn't take child to HF)	12	1.3%
Ownership of working		
	(N=900)	(%)
	Yes	
Cell phone	843	93.7%
Radio	524	58.2%
TV	384	42.7%

3.3 VAS Coverage among Children 6 - 59 Month of Age

Key Finding: 93.2% of children aged 6 - 59 months received VAS during the August / September 2020 round of VADI in Nassarawa state

The primary objective of the survey was to validate administrative VAS coverage data and identify factors associated with the receipt of VAS in Nasarawa. The survey results showed that 93.2% of eligible children were supplemented, as seen in Table 4 below. This is similar to the administrative tally sheet data reported by the state (97.0%) signifying that the coverage was not unduly exaggerated, but is a true representation of the actual coverage.

Table 4: Coverage of Vitamin A Supplementation (VAS) among Children 6-59		
	(n/N)	(%)
Overall	839/900	93.2%
By Sex		
	(n/N)	(%)
Female	464/495	93.7%
Male	375/405	92.6%

3.4 Deworming Coverage among Children 12 - 59 Month of Age

Key Finding: 91.1% of children aged 12 - 59 months received deworming medication during the August / September 2020 round of VADI in Nassarawa state

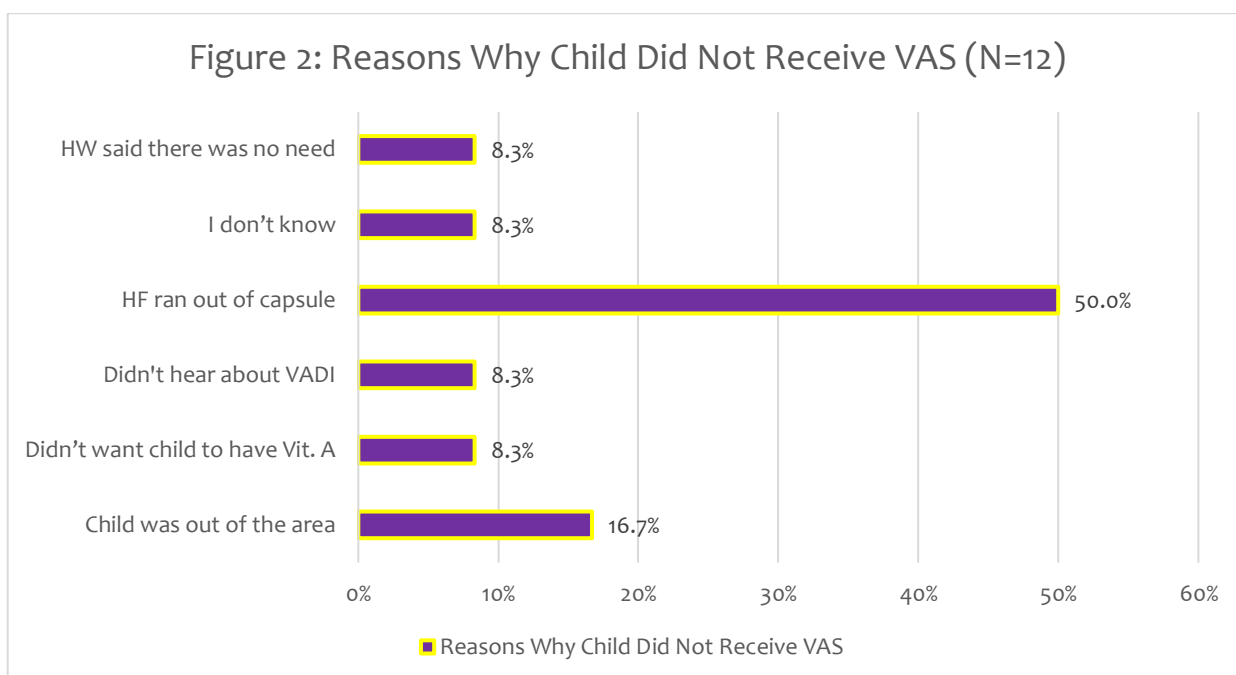
The survey results revealed that 91.1% of eligible children (12 - 59 months) received deworming tablets during the last VADI in Nassarawa state, as seen in Table 5 below. This is close to the administrative tally sheet data reported by the state (97.0%) signifying that the coverage was not unduly exaggerated.

Table 5: Coverage of Deworming among Children 12-59		
	(n/N)	(%)
Overall	717/787	91.1%
By Sex		
	(n/N)	(%)
Female	395/431	91.6%
Male	322/356	90.4%

3.5 Characteristics of Children Missed During the Last Campaign

Key Finding: Only very few (6.8%) children did not receive VAS during the last VADI in Nassarawa state and the main reason given by half (50.0%) of the caregivers of those missed was that the Health Facility ran out of Vitamin A capsules. Only 8.3% of these respondents said their child did not received because they were not aware of the VADI

Figure 2 provides information on the reasons why a few eligible children missed being supplemented during the August/ September 2020 VADI exercise in Nassarawa state. Half of the caregivers (50.0%) interviewed said their children did not receive VAS because the HF ran out of capsules. About sixteen percent (16.7%) of children were missed because they were out of the area during the VADI, while an equal percentage (8.3%) were missed either because their caregivers were not aware of the event or didn't want their child to receive Vitamin A.



3.6 Caregiver Knowledge about Vitamin A

Key Finding: While many caregivers (73.8%) knew that Vitamin A prevents blindness, fewer (34.2%) knew about its role in strengthening the child’s immune system and thus reducing the risk of death (9.3%)

3.6.1 Caregivers’ Awareness about Vitamin A and Its Benefits

Table 6 below shows that a few of the caregivers (16.8%) did not know any benefit of Vitamin A. Only 34.2% knew that VAS protects the child against disease or even that Vitamin A reduces risk of death (9.3%), while many (73.8%) reported that Vitamin A prevents blindness/helps vision.

Table 6: Caregivers’ Awareness of and Knowledge about Vitamin A and Its Benefits		
Have you ever heard about Vitamin A?	(N=900)	(%)
Yes	690	76.7%
No	210	23.3%
What are the Benefits of Vitamin A?		
	(N=690)	(%)
Prevents blindness / Helps Vision	509	73.8%
Protects against Disease	236	34.2%

Reduces risk of death	64	9.3%
Improves child's health	131	19.0%
Helps with growth	63	9.1%
I don't know / Don't Remember	116	16.8%
Others (Cures malaria; Measles)	2	0.3%

3.6.2 Caregivers' Knowledge of the Recommended Age of 1st VAS Receipt among Children

In table 7 below, only about forty percent (42.2%) of caregivers knew the correct age at which a child should receive Vitamin A for the first time (i.e. at 6 months). Almost half (49.1%) did not know the correct age.

At what Age should a Child Receive Vitamin A for the 1st Time?	(N)	(%)
At Birth	7	1.0%
6 Months	291	42.2%
9 Months	33	4.8%
I don't know	339	49.1%
Other	20	2.9%

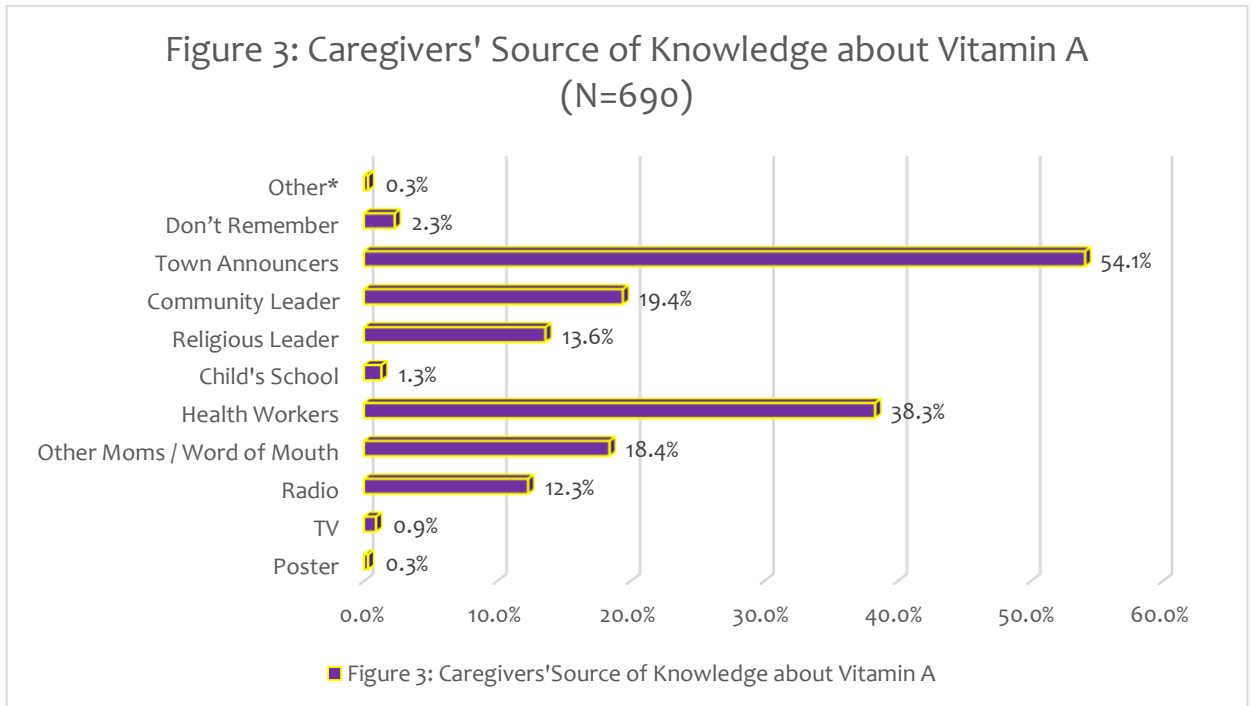
3.6.3 Caregivers' Knowledge of the Frequency of VAS for Eligible Children

Table 8 below shows that in Nassarawa state, only 40.4% of caregivers could correctly state the frequency of VAS receipt among eligible children (i.e. every 6 months). More than half (58.3%) did not know this fact.

How often should a Child 6 - 59 months receive Vitamin A capsules?	(N)	(%)
Don't Know	402	58.3%
Every 6 months (2 times/year) / During each VADI	279	40.4%
Every Day	1	0.1%
Other	13	1.9%

3.6.4 Caregivers' Source of Knowledge of Vitamin A

Figure 3 below indicates that in Nasarawa, the most common source of information about Vitamin A was from Town Announcers (54.1%), followed by the Health workers (36.2%) and then Community Leaders (19.4%).



*Other: I already knew of VAS before the campaign

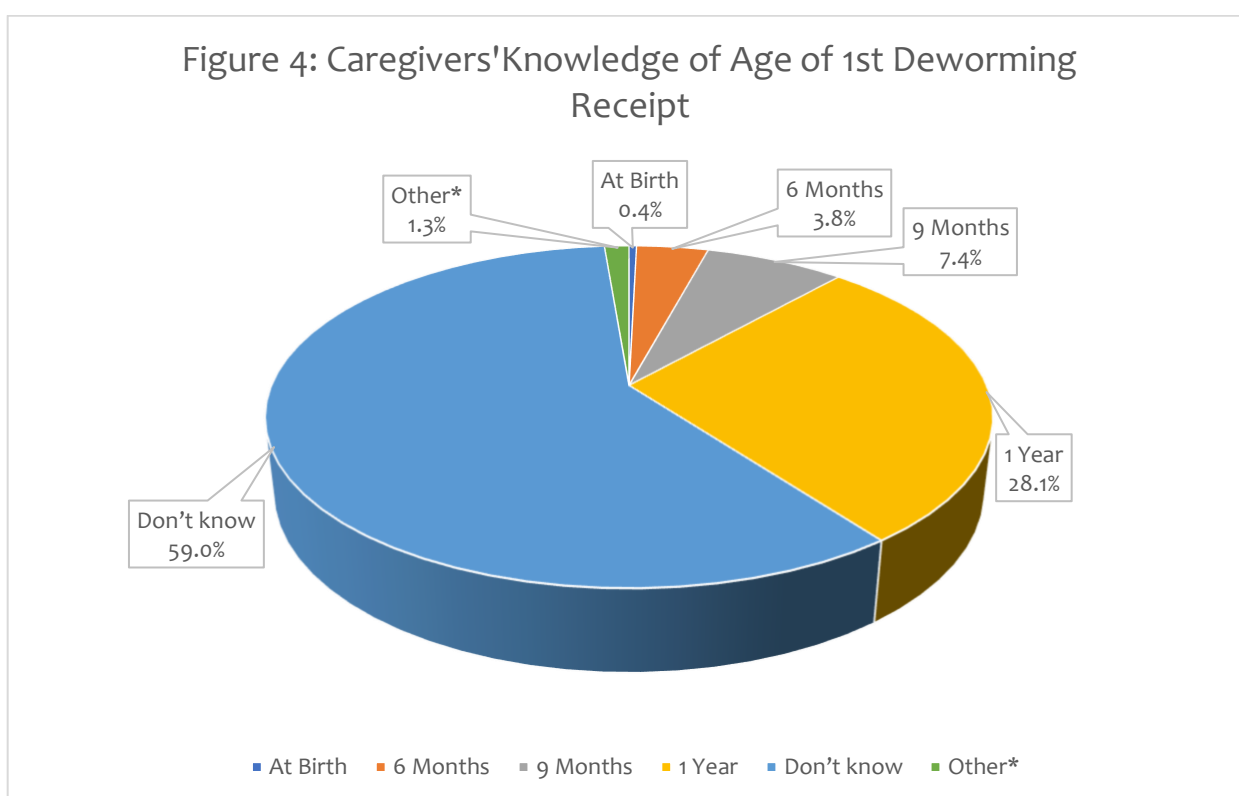
3.7 Caregivers Knowledge about Deworming

3.7.1 Caregivers' Knowledge about the Benefits of Deworming

Over sixty percent (64.9%) of caregivers knew that the key benefit of deworming was to treat intestinal worms while very few (2.3%) knew that it protects against anaemia. However, almost a third (29.4%) did not know any benefit as shown in Table 9 below:

What are the Benefits of Deworming?	(N)	(%)
Treatment of intestinal worms	584	64.9%
Treatment of stomach pain	211	23.4%
Protects against illness	76	8.4%
Protects against anaemia	21	2.3%
Improves child's health	101	11.2%
Don't know	265	29.4%

3.7.2 Caregivers' Knowledge about the Age of First Receipt of Deworming



As shown in Figure 4 above, more than half of the caregivers did not know the age at which a child should begin receiving deworming tablets (i.e. at 12 months or 1 year). Only, 28.1% of caregivers knew the correct age of 1st receipt for deworming.

3.8. Caregivers Knowledge about VADI

Data in Table 10 below shows that majority (95.1%) of the caregivers were aware that a VADI event held in their community in August / September 2020. However, only 41.2% knew the key target group of the VADI exercise (i.e. children 6 - 59 months). Majority (90.4%) recalled that

the VADI exercise took place mostly in their homes with the health workers going door-to-door supplementing eligible children. Majority of the caregivers recalled that VAS (94.4%) and deworming (82.4%) were the 2 key commodities administered to eligible children during the event. The main source of awareness creation about the VADI mentioned by the caregivers was town announcer (63.3%), followed by health workers (24.1%) and community leaders (23.7%). More than half (58.9%) recalled that the date of the VADI exercise was the main key messages passed across to them about the VADI.

Table 10: Caregivers' Awareness of and Knowledge about VADI		
Was there VADI in your community in August / September 2020?	(N=900)	(%)
Yes	856	95.1%
No	24	2.7%
I don't Know	20	2.2%
Who should attend the VADI?	(N=856)	(%)
Everyone	17	2.0%
All children	212	24.8%
Children 6 – 59 months	353	41.2%
Women of Reproduction age	20	2.3%
Don't know	255	29.8%
Others	48	5.6%
Where did the VADI exercise take place?	(N=856)	(%)
Health facility / hospital	38	4.4%
Home / door-to-door	774	90.4%
Market	2	0.2%
Church / mosque	20	2.3%
School	5	0.6%
Don't know	8	0.9%
Other (hamlet: 4; Mai-ungwa's house: 5)	9	1.1%
What services were provided during the last VADI?	(N=856)	(%)
Deworming	705	82.4%
VAS	808	94.4%

Don't know / don't remember	42	4.9%
How did you find out about the VADI event?		
	(N=856)	(%)
Poster	5	0.6%
TV	5	0.6%
Radio	86	10.3%
Other mothers / word of mouth	134	15.7%
Health worker	206	24.1%
Child's school	3	0.4%
Religious leaders / places of worship	152	18.1%
Community leaders	199	23.7%
Town announcer / roaming vehicle with loudspeaker	531	63.3%
Don't remember	20	2.4%
What specific message were you given about the VADI event?		
	(N=856)	(%)
Date of the VADI	494	58.9%
Time VADI starts and ends daily	337	40.2%
Venue of the VADI	309	36.8%
Target group of the VADI	263	31.3%
Benefits of the VADI	253	30.2%
Other	68	8.1%
None	494	58.9%

3.9 Health Workers and Community Leaders' Recollection of VADI

3.9.1 Channels and Messages about VADI to Caregiver

The survey also conducted key informant interviews with health workers and community leaders in the 30 selected communities of Nassarawa state. Findings from the interview show that all the health workers (100%) and almost all the community leaders (96.7%) affirmed that a VADI event held in their community in August / September 2020.

Both groups of informants recalled that Town announcers was the main channel used to sensitize caregivers about the VADI (86.7% of Health workers and 69.0% of Community

Leaders), with religious leaders and community leaders being other channels. Health workers and Community leaders stated that date (76.7% vs. 72.9%), target groups (66.7% vs. 69.0%) and benefits (70.0% vs. 69.0%) were the major key messages about the VADI passed across to caregivers using the afore mentioned channels.

All the health workers (100%) and 86.2% of the community leaders affirmed that a VAS was the key commodity given to eligible children in their communities during the last VADI.

Table 11: Channels and Messages about VADI to Caregivers

	Health Workers		Community Leaders	
Was there VADI in your community in August / September 2020?	(N=30)	(%)	(N=30)	(%)
Yes	30	100%	29	96.7%
No	0	0%	1	3.3%
What channels were used to inform caregivers about the VADI?	N=30	(%)	(N=29)	(%)
Posters	4	13.3%	0	0%
Newspaper	1	3.3%	0	0%
Radio	7	23.3%	7	24.1%
Word of Mouth /Other Mothers	7	23.3%	10	34.5%
Health Worker	10	33.3%	5	17.2%
Religious Leaders	17	56.7%	13	44.8%
Community Leaders	13	43.3%	14	48.3%
Town Announcers	26	86.7%	20	69.0%
Don't remember	0	0%	1	3.4%
Other	5	16.7%	0	0%
What specific message were the caregivers told about the VADI?	(N=30)	(%)	(N=29)	(%)
Date of the VADI	23	76.7%	22	72.9%
Daily Time of the VADI	16	53.3%	17	58.6%
Venue of the VADI	17	56.7%	19	65.5%
Target group of the VADI	20	66.7%	20	69.0%
Benefits of the VADI	21	70.0%	20	69.0%
Don't Remember	0	0%	1	3.4%

Services provided during the last VADI	(N=30)	(%)	(N=29)	(%)
VAS	30	100.0%	25	86.2%
Deworming	30	100.0%	21	72.4%
Immunization	1	3.3%	2	6.9%
Health / Nutrition Education	5	16.7%	3	10.3%
Other services (IFA for pregnant women)	2	6.7%	0	0%
Don't know / Don't Remember				
Location where VAS was given to Child during the last VADI (multiple responses allowed)				
	(N=30)	(%)	(N=18)	(%)
Health Facility	24	80%	7	38.9%
Door-to-Door / Home	30	100%	18	100%
Market	6	20.0%	2	11.1%
Church / Mosque	14	46.7%	5	27.8%
School	2	6.7%	0	0%
Other (special team)	3	10.0%	0	0%

3.9.2 Health Workers' Sociodemographic Characteristics

Among the HWs surveyed, majority worked in the community PHC (90.0%), more than half were males (63.3%), Community Health Extension Workers (53.3%) and had been CHEWs for less than 1 year (76.7%), as shown in Table 12 below:

Gender	(N = 30)	(%)
Female	11	36.7%
Male	19	63.3%
Title/Position	(N = 30)	(%)
Ward Health Supervisor / Coordinator	4	13.3%
Community Health Extension Worker	16	53.3%
Environmental Health Worker	6	20.0%
Other (Focal person, OIC, Medical Lab Assistant)	4	13.3%

How many years have you been in this position?	(N = 30)	(%)
< or = 1 year	7	23.3%
> 1 year	23	76.7%
Type of Health Facility		
Type of Health Facility	(N=30)	(%)
Primary Health Centre (PHC)	27	90.0%
Private Health Facility (PHF)	2	6.7%
General Hospital	1	3.3%

3.9.3 Knowledge of VAS among Health Workers

Table 13 below summarizes the knowledge of HW about VAS. Majority of health workers (90.0%) reported that they had attended a training on VAS, with the last training being received by most (77.8%) barely less than 3 months from when the study was conducted. These findings are also corroborated by fact that 90.0% of HWs mentioned Trainings / Workshops / Seminars as their main source of information about VAS. It is therefore not surprising that many of the health workers were knowledgeable about the target group for VAS (90.0%), the benefits (93.3%), the correct dosage (100.0%), age of first receipt (100.0%) and frequency of VAS receipt (93.3%).

Table 13: Health Workers' Knowledge of VAS		
Have you ever attended training on VAS?	(N = 30)	(%)
No	3	10.0%
Yes	27	90.0%
Last Training on Vitamin A		
Last Training on Vitamin A	(N = 27)	(%)
Less than 3 months ago	21	77.8%
3 - 6 months ago	4	14.8%
7 - 12 months ago	2	7.4%
Target Group for VAS		
Target Group for VAS	(N = 30)	(%)
Children 6 - 59 months	27	90.0%

Children with infectious disease (measles, diarrhoea, ARI)	1	3.3%
Other (11 - 59 months: 2, 12 - 59 months: 1)	3	10.0%
What are the benefits of Vitamin A (multiple responses allowed)		
	(N = 30)	(%)
Prevents blindness / Helps Vision	28	93.3%
Protects against Disease	15	50.0%
Reduces risk of death	3	10.0%
Improves Child's Health	15	50.0%
Helps with Child Growth	8	26.7%
Increases appetite	1	3.3%
I don't know / Don't Remember	2	6.7%
At what age should children receive Vitamin A capsule for the 1st time		
	(N=30)	(%)
6 months	30	100%
At what age should children receive deworming tablet for the 1st time?		
	(N=30)	(%)
6 months	3	10.0%
1 year	21	70.0%
Don't know	1	3.3%
Others (11 months, 23 - 59 months)	5	16.7%
How often should children 6 - 59 months receive Vitamin A capsules		
	(N=30)	(%)
Every 6 months /During each VADI	28	93.3%
Don't know	2	6.7%
Dosage of VAS for children 6-11 months		
	(N=30)	(%)

One blue/100,000 IU capsules	30	100%
One red	1	3.3%
Half Red / 200,000 IU capsules	9	30.0%
Other: (2 drops of red capsules: 1)	1	3.3%
Dosage of VAS for children 12 – 59 months		
	(N=30)	(%)
One red / 200,000 IU capsules	30	100%
Two Blue / 100,000 IU capsules	11	36.7%
Sources of Information about VAS		
	(N=30)	(%)
Radio	8	26.7%
FMOH/SMOH Staff	3	10.0%
NGO	1	3.3%
Poster/Job Aid/Flier/Banners	5	16.7%
Trainings/Workshops/Seminars	27	90.0%
School Curriculum	12	40.0%

3.9.4 Community Leaders' Sociodemographic Characteristics

Table 14 captures the sociodemographic characteristics of the Community Leaders survey. All (100.0%) were males with more than half of them (53.3%) being village heads. More than half of them (53.35) had been community leaders for more than 10 years. However, only 36.75 of them had completed their tertiary (university / polytechnic / diploma / college of education) education. Majority of the community leaders (90.0%) were involved in mobilizing their communities to receive services during the last VADI.

Gender	(N=30)	(%)
Female	30	100%
Male	0	0%
Title/Position	(N=30)	(%)
Traditional Ruler	2	6.7%
Village Head	16	53.3%
Religious Leader	2	6.7%
District Head	1	3.3%
Group / Community Leader	6	20.0%
Other (Madaki)	2	6.7%

Highest Level of Education Received	(N=30)	(%)
None	4	13.3%
Primary Education	8	26.7%
Secondary Education	4	13.3%
Islamic school	3	10.0%
University / Polytechnic / Diploma / College of Education	11	36.7%
How many years have you been a community leader?		
	(N=30)	(%)
<=5 years	7	23.3%
6 - 10 years	7	23.3%
>10 years	16	53.3%
Role during the last VADI		
	(N=30)	(%)
No role	1	3.3%
Advising local leaders / Community mobilization	27	90.0%
Administering VAS	1	3.3%
Other (Entertainment of Health teams)	1	3.3%

3.9.5 Knowledge of VAS among Community Leaders

Table 15 below shows that most of the community leaders (83.3%) had heard about Vitamin A. While majority knew that it prevents blindness (80.0%), fewer knew of Vitamin A's role in strengthening the child's immune system by protecting against diseases (40.0%) and thus reducing the risk of death (8.0%).

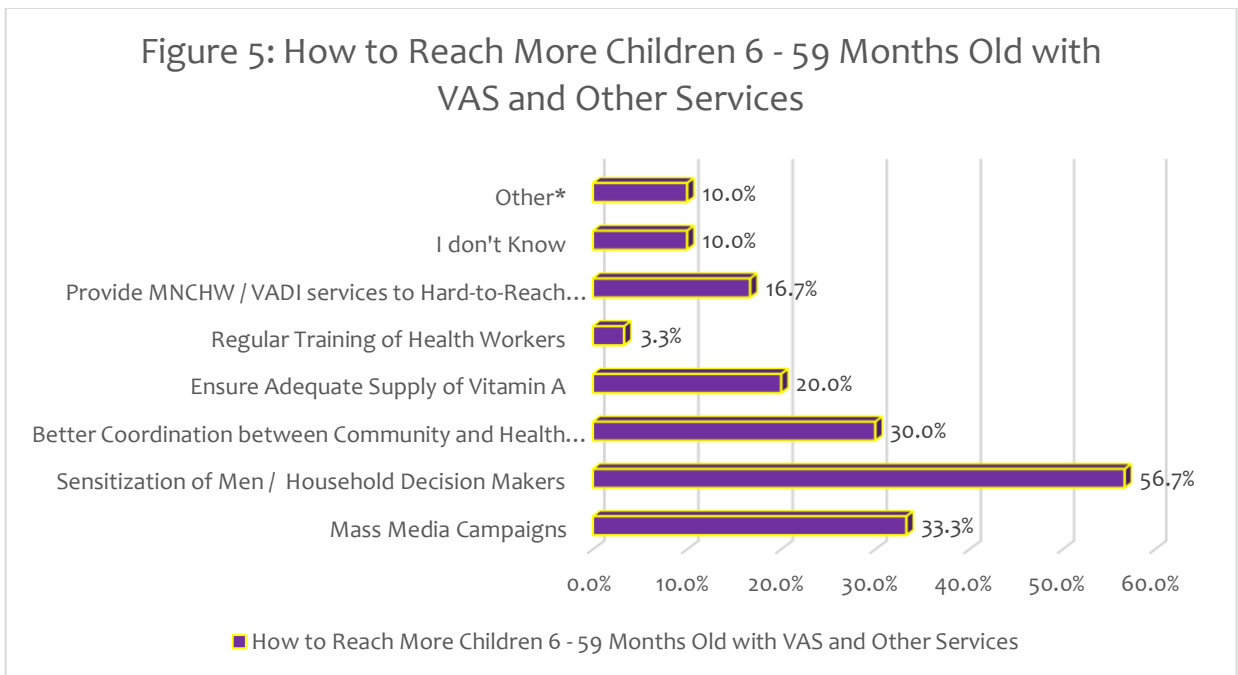
Only about a third of the community leaders knew the age by which children should receive VAS for the 1st time (36.0%) and the frequency of VAS receipt among eligible children (32.0%). Most of the CLs (76.0%) received information about VAS from health workers.

Have you ever heard of Vitamin A?	(N=30)	(%)
No	3	10.0%
Yes	25	83.3%
Don't know	2	6.7%

What are the benefits of Vitamin A (multiple responses allowed)	(N=30)	(%)
Prevents blindness / Helps Vision	20	80.0%
Protects against Disease	10	40.0%
Reduces risk of death	2	8.0%
Improves Child's Health	4	16.0%
Helps with Child Growth	3	12.0%
I don't know / Don't Remember	6	24.0%
At what age should children receive Vitamin A capsule for the 1st time	(N=25)	(%)
6 months	9	36.0%
9 months	1	4.0%
I don't know	12	48.0%
Others (1-2 years, 1 - 6 years, from 5 years down)	3	12.0%
At what age should children receive deworming tablet for the 1st time?	(N=30)	(%)
6 months	2	6.7%
9 months	2	6.7%
1 year	4	13.3%
Don't know	20	66.7%
Other (From 5 years down)	2	6.7%
How often should children 6 - 59 months receive Vitamin A capsules	(N=25)	(%)
Every 6 months /During each VADI	8	32.0%
Don't know	16	64.0%
Other (Once a year)	1	4.0%
Sources of Information about VAS	(N=25)	(%)
Radio	7	28.0%

Health Worker	19	76.0%
Poster/Flier/Banners	5	20.0%
Trainings/Workshops/Seminars	7	28.0%
School Curriculum	2	8.0%
Other (Ward Development Committee)	1	4.0%

3.9.6 Community Leaders' Perception on How to Reach More Eligible Children



*Other: Including older people, conducting the VADI more frequently, proper coordination

When asked what could be done to reach more eligible children in their communities with VAS and other key child survival services, more than half of the community leaders (56.7%) stressed the need for continued sensitization of men or household decision makers as shown in Figure 5 above.

4. DISCUSSION

The PEC survey was conducted in Nasarawa State within six weeks of the August/ September 2020 VADI. The main reasons for conducting the survey were to validate administrative VAS coverage data and identify factors associated with the receipt of VAS in Nasarawa State and to assess the contribution made by the social mobilization strategy on caregiver awareness and participation during the August / September 2020 VADI in Nasarawa State.

Findings from the survey revealed that 93.2% of children 6 - 59 months of age received Vitamin A during the last VADI in Nassarawa state. This is similar to the administrative data released by the state that reported a VAS coverage of 97.0%. Findings on deworming coverage also showed the same pattern (91.1% PECS vs. 97.0% administrative). This suggests that the administrative coverage for both interventions was not unduly exaggerated, but is a true representation of the actual coverage. The delivery platforms used by the state during the VADI could be responsible for the high coverage. Due to the global suspension on mass vaccination campaigns by the WHO, Nassarawa state adapted the GAVA guidelines on safe administration of Vitamin A in the context of COVID-19, by using trained health teams to deliver VAS to eligible children at home via a mainly door-to-door approach, in addition to having fixed post teams at the health facilities and special mobile transit teams. This delivery approach differs from the normal way the MNCHW campaigns are usually implemented i.e. as a mainly health facility-based intervention. To sustain high VAS coverage, especially within the context of COVID-19, it is recommended that these 3 delivery platforms (house-to-house, fixed and special mobile teams) continue to be used.

Findings from the survey revealed that only very few children were missed (6.8%). However, it is instructive to note that the main reason given by caregivers why their children did not receive Vitamin A was that the health facility ran out of capsules. This is most likely due to the fact that more emphasis was placed on providing the door-to-door and special mobile teams with Vitamin A, with only a limited quantities provided at fixed health posts (i.e. the health facility) in the event that a caregiver brought an eligible child to receive routine services. For subsequent VADI events, it is therefore necessary for proper forecasting and planning to be done to fully meet the VAC needs at all platforms.

The PEC Survey also revealed that detailed knowledge of VA among caregivers was poor. Although only a few (16.8%) did not know any benefit of VA, more than half (57.8% and 59.6% respectively) didn't know the age at which children should receive VA for the first time, nor the frequency of VAS receipt. Only about a third of the caregivers (34.2%) knew that VAS protects the child against disease or even that Vitamin A reduces risk of death (9.3%), These findings suggest that health workers may not be consistently educating caregivers on VAS during health talks or after supplementing their children. The main reason given by some of the health workers interviewed was that the modified door-to-door model required them walking from house-to-house and ensuring all COVID-19 protocols were strictly adhered to in each household visited and for every child that was to be supplemented, in addition to other duties such as recording in the

tally sheets, finger marking and house marking. This was time consuming for just 2 health workers to do compared to the more convenient health facility-based MNCHW model. They were therefore trying to meet up the number of households / children assigned for them to reach per day and did not have the luxury of time to give a detailed health talk as they would normally do during the health facility-based MNCHW model where a pool of mothers would be gathered together at the health facility. To address this, HWs were and will need to be encouraged to still give brief health talks to caregivers after each supplementation using the neck tag job aids provided by Helen Keller, which contains key messages such as the benefits of Vitamin A, target groups, age of first receipt and frequency of receipt. These job aids also contain key messages on deworming and COVID-19 prevention. To reduce the workload, the number of health workers in each team should also be increased from two (2) to at least three (3).

According to PECS, main sources of information mentioned by caregivers for passing across information about the VADI event were via Town Announcers (63.3%), followed by the community leaders (23.7%). This is not surprising as trained town announcers usually walk through communities passing information about the event prior to and during the VADI. Caregivers are also in close contact with community leaders and these community leaders are usually sensitized prior to the VADI exercise. It is therefore important to keep sensitizing and strengthening the capacity of these key information channels using specific / targeted key messages in order to further improve mobilization, uptake of services and subsequently coverage among the target beneficiaries of VADI.

Survey findings show that many of the health workers had detailed knowledge about VAS, its benefits (93.3%), the correct dosage (100.0%), age of first receipt (100.0%) and frequency of VAS receipt (93.3%). This is encouraging because previous surveys have found only a general awareness about Vitamin A among health workers with very few (37.5%)⁹ having detailed knowledge about the intervention. This suggests that the training given to the health teams prior to the VADI event was effective, and should continue.

The same can however not be said for the Community Leaders. While most of them (83.3%) had heard about Vitamin A and knew that it prevents blindness (80.0%), fewer knew of other key details about Vitamin A such as it's important role in strengthening the child's immune system by protecting against diseases (40.0%) and thus reducing the risk of death (8.0%). Only about a third of the community leaders knew the age by which children should receive VAS for the 1st time (36.0%) and the frequency of VAS receipt among eligible children (32.0%). Most of the CLs (76.0%) received information about VAS from health workers. This suggests that although the HWs are well trained and knowledgeable, they are not taking the time to effectively pass down this knowledge to others such as community leaders and caregivers. Community leaders are important, not just as gatekeepers but also as a trusted source of information about health events in their communities.

⁹ Helen Keller International 2016, Report of Post Event Coverage Survey of the Maternal Newborn and Child Health Week Conducted in FCT

The survey also found that caregivers mentioned community leaders as their 3rd main source of information about Vitamin A.

Given this fact, HWs therefore need to be encouraged to properly educate community leaders and beneficiaries about Vitamin A prior to the VADI event (e.g. during community dialogues) and during implementation.

It is imperative to note that community leaders suggest continued sensitization of men and household decision makers as an effective way to reach more eligible children with Vitamin A and other child-survival services in the community. This is already being done via the community dialogues which often includes community leaders, religious leaders, leaders of market unions, school administrators, caregivers e.t.c. Efforts should therefore be made to continue strengthening this pre-implementation aspect of the VADI, to ensure fair representation of men, who are also often the household decision makers.

5. CONCLUSION AND RECOMMENDATIONS

The PEC survey has demonstrated that VAS and deworming coverage among children 6 - 59 months and 12- 59 months of age respectively is above the recommended 80% coverage level required for a public health effect. The modified VADI delivery model, using 3 sets of trained health teams (door-to-door, fixed post / health facility and special mobile transit teams) seemed to be the greatest contributor to the large proportion of eligible children reached and consequently, the high coverage recorded. Using trained community structures such as town announcers also seemed to be effective in sensitizing caregivers, creating awareness and ensuring uptake of VAS and deworming during the VADI, despite the challenge posed by COVID-19.

Training of health personnel prior to the VADI was also found to be effective, as seen by their detailed knowledge of VAS. However, the need to effectively cascade this detailed knowledge of VAS and deworming down to the community leaders and key beneficiaries (caregivers) was also seen.

Based on the survey findings, the following actions are recommended:

1. Advocacy for timely and sufficient release of fund by the State and LGAs to facilitate the full implementation of the VADI
2. Continued use of the modified delivery model / platform, especially in the context of COVID-19 is encouraged
3. Proper planning and forecasting should be done to ensure no stock out of VACs at the health facility during the VADI
4. Capacity strengthening of HWs on VAS, deworming and COVID-19 key messages during training and using the neck tag job aids should also continue and HWs should be reminded to consistently pass across these key messages to community leaders and caregivers prior to and during implementation.
5. Increasing the number of health workers per health team from 2 to at least 3 to reduce the workload on the health workers and ensure health talks are given to caregivers after each supplementation
6. Continued use of trained town announcers to create awareness among caregivers and the community prior to and during the VADI is also encouraged
7. Continued sensitization of men and household decision makers during community dialogues is also recommended.

6. PICTURES

Below are some pictures of the PECS in Nassarawa state:



Caregiver Interview in Umerayi Community, Keana LGA, Nassarawa state



Health Worker interview in Arumange PHC



Team 5 with the community Guide in Assakio community, Laffia LGA



Drawing the Community Map with the help of the community guide (Ashige community, Lafia LGA)



Team 4 at the Community Leader's Palace in Obi LGA



House marking after a caregiver interview in Obi LGA